

JULY 1910 ~ N<sup>o</sup> 55

Issued Every Month

for Free Distribution to Users  
of Machine Tools

HITCHCOCK'S  
**MACHINE  
TOOL LIST**

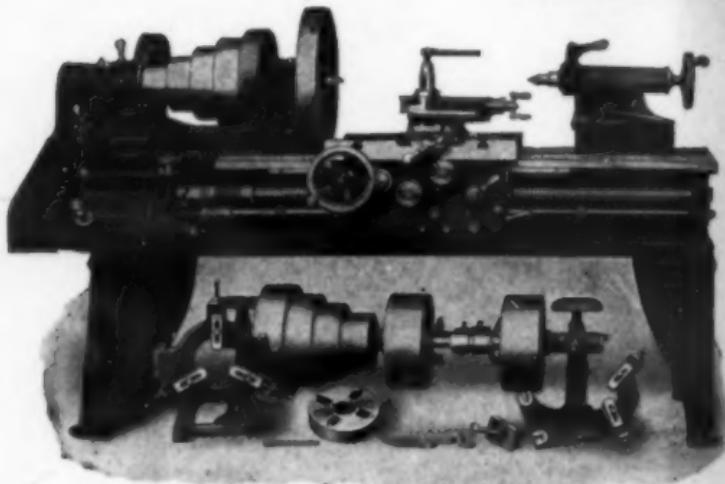
A Reference Book for Buyers  
of Iron Working Machinery

Published by  
A. H. HITCHCOCK  
1220-1235 Caxton Building  
Chicago

# Champion

## Quick Change Gear

# Lathes



### 18-Inch Quick Change Lathe

Have all the improved features of the modern lathe, and some more too.

The feed can be set to automatically disengage in either direction instead of on the forward feed only. Rod and screw feeds can not be engaged at the same time. The lead screw is provided with a clutch so it need only be in motion when using the lathe for screw cutting. Rack pinion can be engaged or disengaged instantly if it is desired to chase a more accurate thread with the pinion out of mesh with the rack.

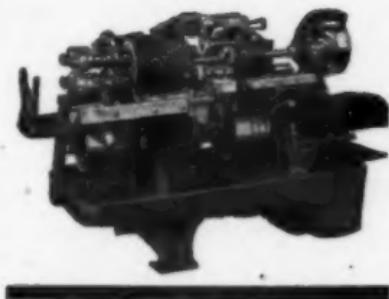
**40 quick changes of feed or threads** are instantly obtainable without the removal of a gear, shifting of lathe quadrant, or any parts other than the 3 fixed handles and knobs for making the changes. All gearing not partially, but completely, encased.

*Send for catalogue of five sizes*

10, 12, 14, 16 and 18 inch

**Champion Tool Works Company**  
2426 Spring Grove Ave., Cincinnati, Ohio, U. S. A.

*"It makes duplicate parts at the lowest cost per piece."*



## The Acme Automatic Multiple Spindle

is the pioneer Multiple Spindle and Single Drive Screw Machine.

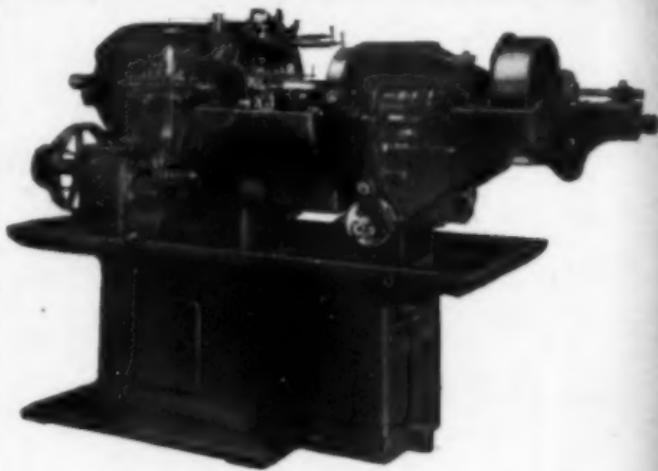
The four stock spindles and eight tool positions provide for eight or more operations which are completed in the time required for the longest. A piece is finished at each quarter turn of the cylinder.

The Single Belt Drive lowers the investment, saves wear on the machine, is convenient for operator, and concentrates the power.

The practical development of these ideas is being shown daily by the number of Acmes used, the quality of the goods produced, and the unequalled rate of production.

**THE NATIONAL-ACME  
MANUFACTURING CO.  
CLEVELAND, OHIO**

BRANCH OFFICES: NEW YORK, 77 White Street.  
BOSTON, 141 Milk Street. CHICAGO, 549 Washington  
Boulevard. DETROIT, 1222 Majestic Building. ATLANTA,  
Candler Building. Warehouses: New York,  
77 White Street. CHICAGO, 549 Washington Boulevard.



## 125 : 75 :: The Lester : (The Other Kind)

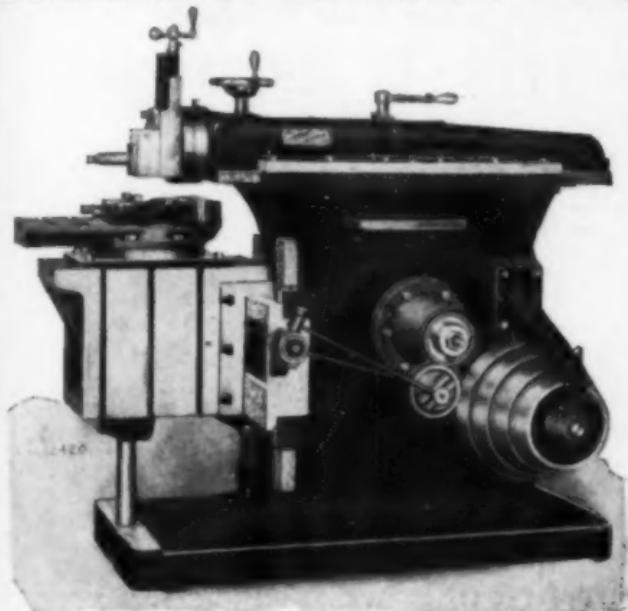
One of our customers asked us for an estimate on a sample piece which they submitted to us. They were getting seventy five per hour from their multiple spindle machines. The Lester produced with ease one hundred and twenty five—we think, as the cat told the sewing machine, "That's going some."

*We would like to have your samples*

**The Davis Sewing Machine Co.**  
Manufacturers  
Dayton, Ohio

# The High Reputation of "Cincinnati" Shapers

Is Because of the Work They Do in the Shop



24-in. Back Geared "Cincinnati" Shaper.

This was long our ambition—now an established fact:

*1st: To build the best shapers, irrespective of price.*

*2nd: To build the best shapers so they could be marketed at a reasonable price.*

It required lots of capital and years of time and patient care to bring our shapers up to their present state of efficiency; then more money, time and care to equip our shop and organize our force for the most economical manufacture of high-grade tools.

The result is not a cheap tool—that isn't consistent with quality; but we believe we offer the most shaper value, the most actual working, metal-cutting value for the money than can be found in any line of shapers built.

*Our free Shaper Book tells how we do it; do you want one?*

**The Cincinnati Shaper Company**  
Colerain Ave. & Elam St., Cincinnati, Ohio

# 100 CISCO 14" LATHES

That's our record since we started building them in March.

## SOLD

Because of accuracy, workmanship, strength of construction and material.

## SINCE

our first one, we have added several new features, and to

## MARCH

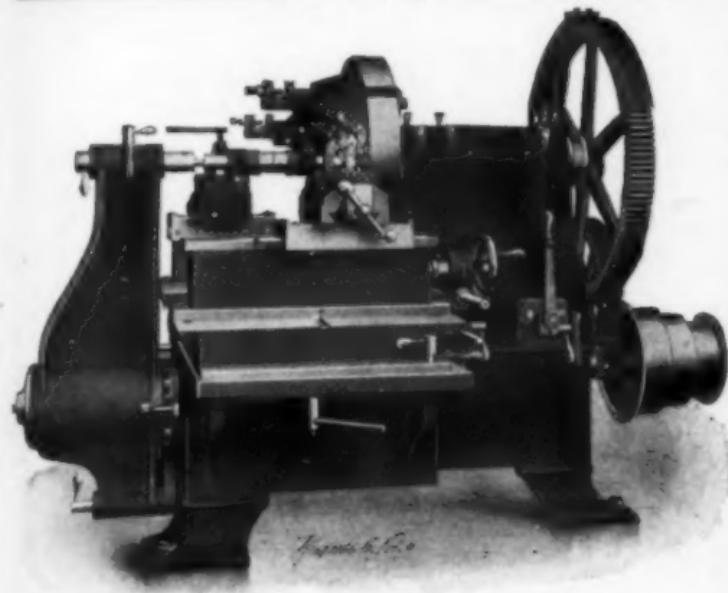
with the world's progressives, you should buy at once.

**MACHINERY AND EQUIPMENT DEPT.**  
**THE CINCINNATI IRON & STEEL CO.**  
**CINCINNATI, OHIO**

# Streit Pulley Machinery

Will REDUCE Cost on Your Pulleys

60%



## Streit Pulley Lathe

Built in six sizes: 15, 20, 30, 36, 40 and 50 inch.

THIS PULLEY LATHE is designed for this special purpose and embodies every *time saving* feature possible.

Two tools working simultaneously from center in opposite direction.

Swiveling Table, setting tools at once for any crown desired.

Movable Tail Stock, facilitating quick change of work.

Special Face Plates and Drivers save cost of chucking.

Changes of feed made instantly. Lateral and cross feed.

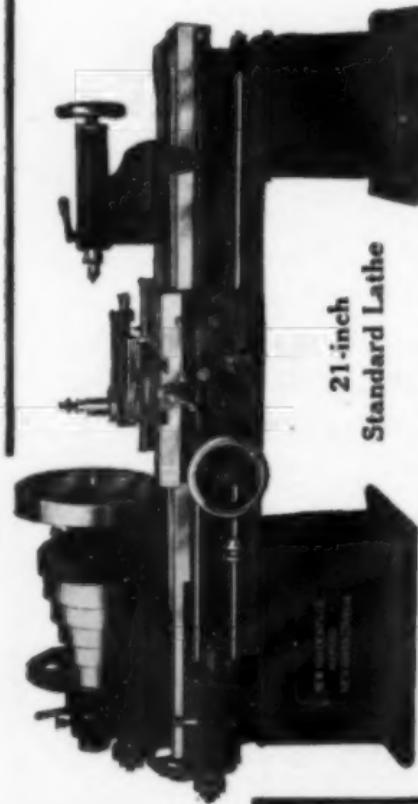
Strong, Accurate, Rigid and Durable.

Easily Operated. Quick Adjustment.

Also adapted to gears, fly-wheels, drums, etc.

The Cincinnati Pulley Machinery Co.  
Cincinnati, Ohio

# A Complete Lathe At a Moderate Price



The New Haven Standard Moderate-Priced Lathes are made in sizes 18, 21, 24 and 28 in. swing, 8 to 18-ft. bed. Our 60 years of experience in making and marketing none but reliable machines is sufficient guarantee against any catch-penny devices. These Lathes are practical shop tools that exemplify the full purchasing power of the dollar.

Then there's our line of Improved Engine Lathes, from 24 to 65-in. swing, on which we have spared no pains to make them the best that money can buy. Our long experience, with an organization for economical manufacturers, enables us to sell them at the right price for careful buyers.

*We're at your service, gentlemen; what will you have?*

**New Haven Manufacturing Co., New Haven, Conn.**



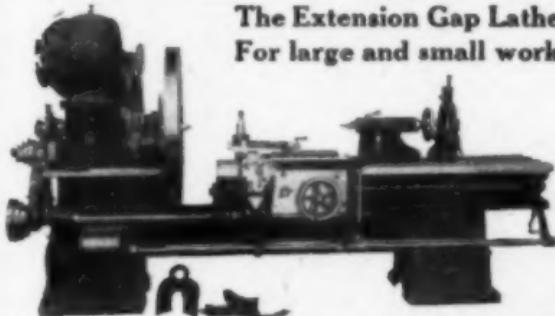
## Cincinnati Lathes

Endurance and suitability for constant use is vitally important to careful buyers. Literature gives details about their two kinds of **Feed Boxes**, **Double Wall Apron**, **3 step or 5 step Cone** and other important features it pays to investigate.

**The Cincinnati Lathe & Tool Company**  
2730-32 Spring Grove Avenue, : : : Cincinnati, Ohio

## A Busy and Profitable Tool

**The Extension Gap Lathe**  
For large and small work



A lathe that will handle ordinary work as economically as a smaller tool, and that at the same time will take large and long work which is beyond the capacity of the average lathe. It is a tool of splendid construction, with a number of special features that add to its handiness for all classes of lathe work. Belt or motor drive.

*Shall we send you complete description?*

**FAY & SCOTT,**

**Dexter, Maine**

Standard Engine, Chucking, Turret, Double Head Facing and Pattern Makers' Lathes; Lathe Turrets for any make of Engine Lathes.

COMBINATION  
**DRILL, CUTTER AND  
REAMER GRINDER**



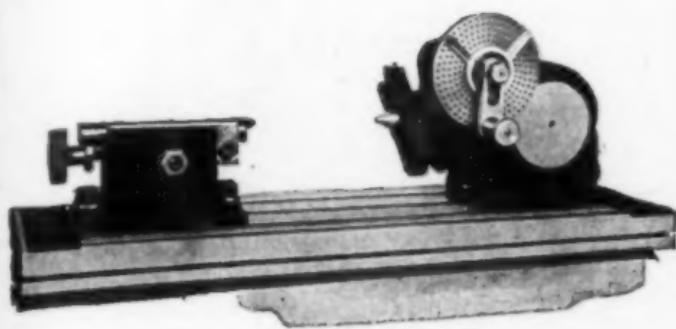
**STYLE BX.** Weight 385 lbs.

For simplicity and accuracy this machine is not equalled. No preliminary adjusting for grinding drills; range of work on Cutter Grinder equal to the much more expensive machines on market which do not grind drills; drills and cutters can be ground at same time by two operators without one interfering with the other; and the price is right.

Send for catalog fully illustrating

**WILMARTH & MORMAN CO.**  
575 Canal St., Grand Rapids, Mich.

Boston



**Chicago Universal Dividing Centers.**

**Price \$50.00**

For use on the No. 3-A  
Chicago (Duplex) Hand Mill-  
er. The Screw Vertical Ad-  
justment to the Knee facil-  
itates obtaining the correct  
depth of tooth in cutting spur  
and bevel gears.

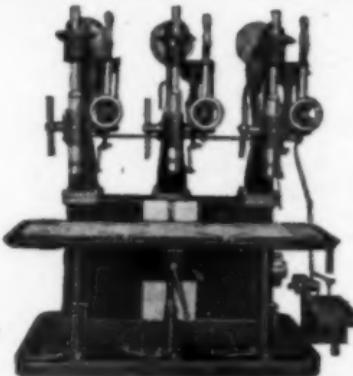
**Chicago Machine Tool Co., Chicago, Ill.**

Demonstrations at

**HILL, CLARKE & CO., INC.**

**Boston New York Cleveland Philadelphia Chicago**

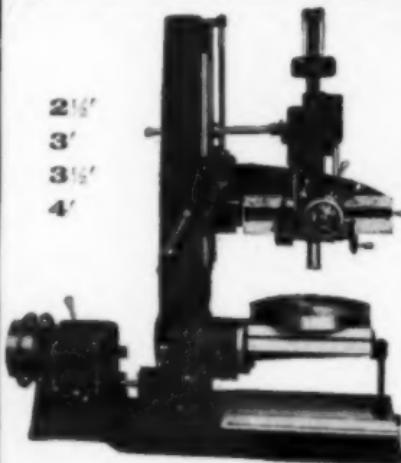
# Rockford Gang's



They not only drill, but they bore, ream, tap and face without removing work from jig.

*Write for descriptive matter*

**Rockford Drilling Machine Company**  
Rockford, Ill., U. S. A.



Have you ever seen a radial drill with a single-lever control of all spindle motions? The

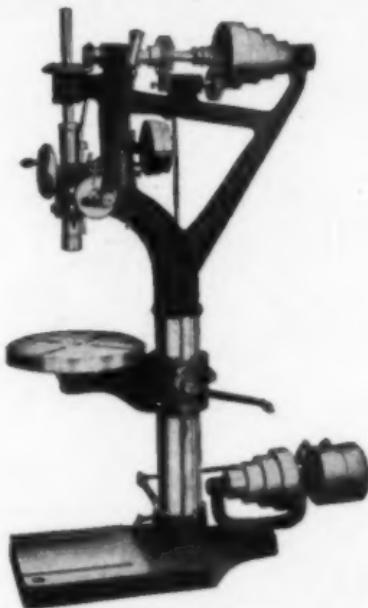
## Gang Radial

has it; also 3 feeds, eight drilling speeds—12 speeds with speed box—a n d enclosed gears. These are some of its features; but there are others, too.

*Glad to have you investigate; why not begin now?*

**The Wm. E. Gang Company**  
Cincinnati, Ohio

# Accurate Machine Tools



## Davis 20-Inch Drill

Furnished with Back Gear, Power Feed, Automatic Stop and Quick Return.

A first-class high-grade tool at a reasonable price.

Orders can be sent to us direct or through leading machinery dealers in all parts of the world.

*For further particulars address*

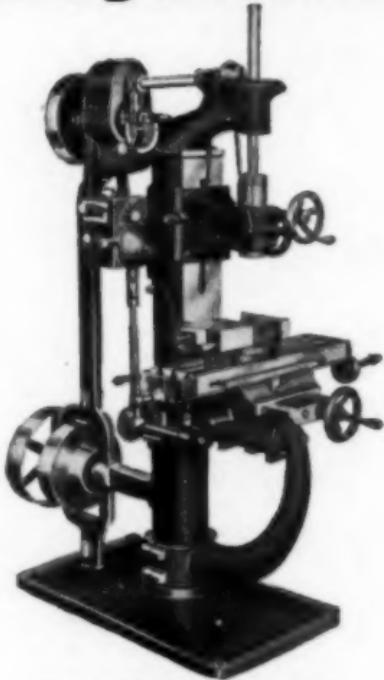
**The W. P. Davis Machine Co.**

Rochester, New York, U. S. A.

**20% to 50% Less Time**

That's What Our No. 2 Takes  
on a Large Variety of

## **Drilling and Milling**



**The Knight No. 2**

ACCURACY? That's one of its strongest features. You can drill, bore and mill at almost any angle with only one setting of the work. It is a rigid and powerful machine, and all adjustments are quickly and easily made. The No. 2 has all the conveniences of our No. 1, but is larger and stronger, so as to take care of heavier work. Its availability for a wide range of particular and difficult work is second to none.

*Delighted to tell you more; Suppose you write us today*

**W. B. Knight Machinery Company**  
St. Louis, Mo.

For a lighter machine but just as handy, investigate our No. 1

For

The  
capa  
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Spur  
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## For Drilling With High Speed Steel

This new 24-inch swing High Duty Drill, with a capacity for drills from  $\frac{1}{2}$  in. to  $1\frac{3}{4}$  in., drives high speed steel drills to their limit in solid steel. Its strong, rigid construction is clearly shown in cut. Spur gears are used entirely, except 1 pair of 2 to 1 bevel gears, and everything is driven in a straight line, with the result that practically *all* the power is transmitted directly to the drill point. This machine is reasonable in cost and it easily excels all other types in efficiency. Details?

**The Foote-Burt Company,**  
Cleveland, Ohio.



*You don't have to shut down the Grant Rotary Riveting Machine when you want to speak to the operator. You can speak in a whisper and be heard.*

The machine illustrated here-with can be furnished for riveting  $\frac{3}{8}$ -in.,  $\frac{1}{4}$ -in. and  $3\frac{1}{16}$ -in. and under.

Absolutely perfect heads can be formed in one second, without distorting the metal or marring the work in any manner.

No springs to break or parts to crystallize, no incessant din, a boy or girl can operate the machine with ease.

*Send for catalogue*

**The Grant Manufacturing & Machine Co.**  
Bridgeport, Conn.

## For Saving Time and Labor



For grinding centers, reamers, cutters and dies; can be used in lathe, planer, shaper, or milling machine.

Bearings adjustable to wear and dust proof.

**Air Cooled**

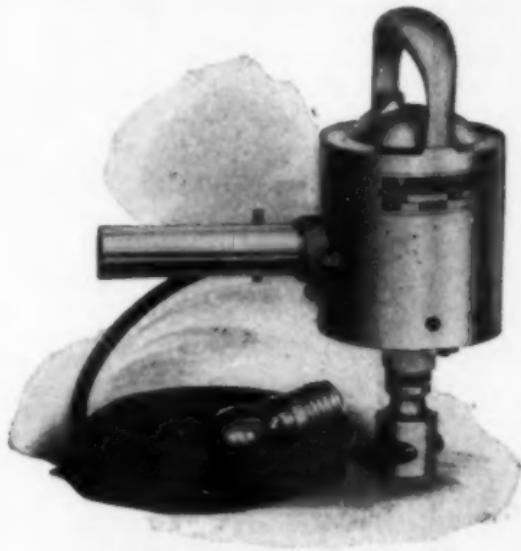
Made in four sizes,  
1-4, 1-2, 1 and  
2 h. p.

Emery wheels  $4\frac{1}{2}$  to  
12 in. diam.

**Sent on Trial**

**THE UNITED STATES ELECTRICAL TOOL CO.**  
CINCINNATI, OHIO

# “Hard Service” Electric Drills and Reamers



Made in six sizes for 110 volt or  
220 volt direct current.

Drilling capacity 1-4 to 2 in.

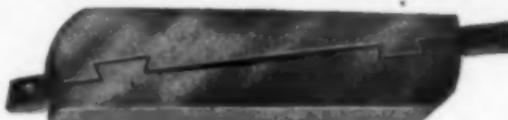
reaming capacity 3-4 to 1 in.

*Write for bulletin No. 18*

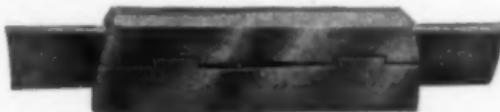
Electric Department

**The Van Dorn & Dutton Co.**  
Cleveland, Ohio

**T C**  
**Are the Best Tool Holders**



This straight turning Tool Holder is reversible and can be used as a right or left straight and offset side tool. Chatter troubles done away with.



The above cut shows the best cutting off Holder ever made. This is reversible. In  $\frac{1}{2}$  dozen lots delivery charges prepaid.

**Wm. S. Nicholls Company**  
251 Broadway, New York



**The United States Turning Tool**

is a "winner" for all around work. The head is low, cutters are of self-hardening steel and designed for rapid and economical work. It has a solid support on the **Sides** of the cutter—insures heavier cut than any other holder of the same size. Saves its cost several times in a single month.

*Send today for catalogue.*

**The Fairbanks Company**  
Springfield, Ohio

Save Time and High Priced Steel  
By Using  
The Abrasive Metal Cutter



THIS MODERN MACHINE with its thin "Abrasive" wheel, cuts  $\frac{1}{8}$  inch square air hardened steel in 10 seconds; 5-16 in. bars of high speed steel in 5 seconds; nickel, steel, or brass tubing, filled with rubber or woven wire, in 2 seconds. All this without drawing the temper or leaving a bur. As it cuts everything square and true, much material is saved, and as no grinding to shape is required, a saving of from 15 to 30 minutes time will be made on each cut.

A comparison of this method and records with those of your own shop, will make you realize what a substantial saving this rapid metal cutter would make possible.

*You can't stop a loss too quick;  
Drop us a line today*

**SLACK MANUFACTURING CO.**  
Springfield, Vermont

## RACINE-HIGH-SPEED-SAWS



Patented July 13-09

RACINE TOOL & MACHINE CO., Racine, Wis.  
Successors to Racine Gas Engine Co.

Cut Your  
Cutting Cost

Will Do The  
Work of 6  
Ordinary  
Machines

Successive  
Orders  
Prove Their  
Superiority

Sent on 30 days  
trial

Write Dep't 9

**Rockford**  
High Duty  
**Power Presses**

Are built to meet the re-  
quirements of Modern Shop  
Practice and they do it.

The shaft and bearings are  
extra large and a proper dis-  
tribution of metal gives  
plenty of strength for the  
hardest work.

*Ask us to show you*

**Rockford Iron Works**  
Rockford, Illinois

## Royal Power Saw No. 3



Will cut 8 inches.

Has a graduated swivel vise.

Automatic stop.

All surfaces are machined fine  
and bearings well fitted.

For cutting all kinds of bar stock in hard or  
soft metals it has no equal. We make 5 sizes.

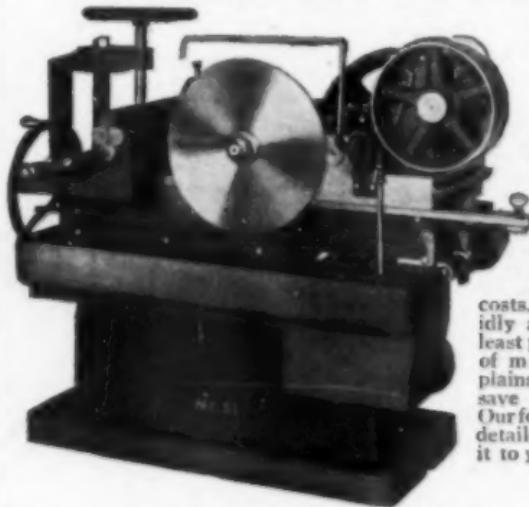
*Get circulars and prices today*

**Frontier Iron Works**  
Buffalo, N. Y.

Power Saws and Drill Presses

# Reduce Your Steel Cutting Costs and Increase the Capacity

The Right Machine, with the Right Saw and  
the Right Teeth, Does the Trick

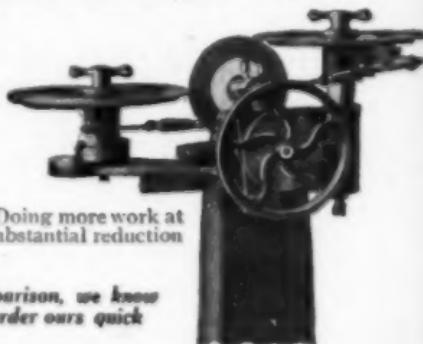


After all, it's very simple. Our No. 54, fitted with a thin saw, and driven at a speed that gives it the highest cutting efficiency, may be a revelation to you when it comes to consider cutting costs. Doing it rapidly and with the least possible waste of material, explains its power to save you money. Our folder contains details; let us send it to you.

## Your Saw will do More Work When the Teeth are Shaped Correctly

This machine does it automatically. While sharpening, it also bevels every other tooth on opposite sides, giving it the relief which prevents clogging, and insuring fast work. Will sharpen metal cutting saws from 12 in. to 20 in. diameter. Doing more work at less expense means a substantial reduction in cost.

*After a careful comparison, we know  
you'll be glad to order ours quick*

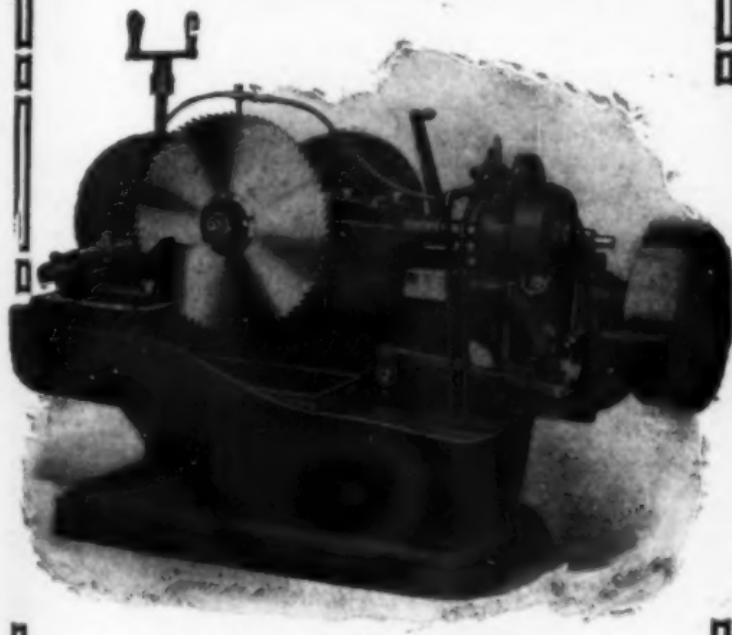


**Nutter & Barnes Company**  
326 A Street, Boston, Mass.

# Cochrane-Bly Metal Saws

Excel in Design, Workmanship and Efficiency

Made in six sizes—3-inch to 8-inch capacity



## No. 5. 6-Inch Type

*Carriage extends solid underneath the ways. No  
bolts on gibbs.*

*Extra large spindle hardened and ground.*

*Powerful drive through hardened gears.*

*Positive screw feed—10 changes.*

*Two speeds to saw spindle.*

*Oil pumps, automatic stop and return.*

*This machine has maintained a daily output of  
96 pieces of 5½-inch steel*

*Our catalogue gives full description*

## Cochrane-Bly Company

118 St. James St., - Rochester, New York, U.S.A.

*Also manufacturers of Saw Sharpening and Filing Machines*

# A 12 Inch Saw, \$100.

Immediate Delivery

Screw Feed and Ball Bearing Thrust

Cuts 3x5 or  
1-2x9 inch.

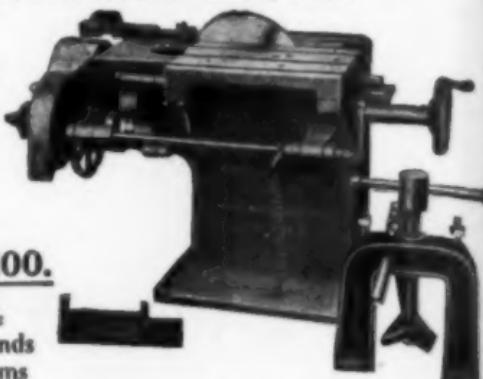
Power Friction  
Feed.

Automatic  
Knockout.

Large Clamp-  
ing Table.

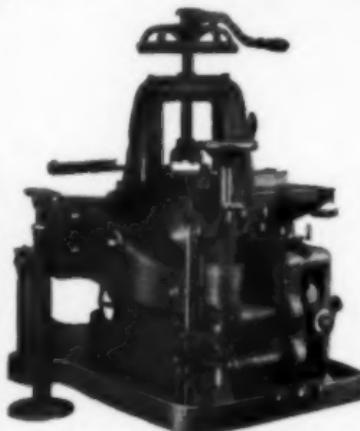
**20 in., \$200.**

CAPACITY:  
5 $\frac{3}{8}$  Inch Rounds  
12 Inch I Beams



*Write for particulars*

Burke Machine Co., Conneaut, Ohio



## *Our New* **1910** *Folder Free*

It describes the newest,  
most improved features  
of cold metal saw design  
as embodied in

**The Lea-Simplex**

*Write today and ask for a copy of "Vital Points"*

**Lea Equipment Co.**  
90 West Street, New York City

**The Highest Economy and Accuracy  
is easily obtained with  
The American Drill Grinder**



**ECONOMICAL** because it grinds the drills *right* in practically an automatic manner, enabling them to stand a high rate of feed, to cut fast without breaking, and to give the longest possible service between grindings.

**ACCURATE** because, being ground correctly, the drills naturally produce true, straight holes.

The secret of correctly ground points lies in keeping the cutting edge vertical, which insures the right clearance. The automatic lip rest which does this on the "American," is a patented improvement. This, with other distinctive features, makes it the only really scientific machine for grinding perfect points.

*Don't let drag till tomorrow  
what you can drill today...be "American"*

**The Heald Machine Company**  
25 New Bond Street, Worcester, Mass.

# Keyways Milled

on the

## Drill Press

Simple as drilling a hole. Accurate duplicate work in less time than you can start it by other methods.

**Oil grooves milled entirely within the journal, preventing oil from escaping from either end.**

National Keyseat and Oil Groove Millers for all jobs of internal Oil Grooving and Keyseating.

*Write for new catalogue*

**National Machine Tool Co.**

128 Longworth St., Cincinnati, Ohio.

# Burke's Bench Miller

## A Seasoned Tool

The tool to buy if you want extreme accuracy and permanent alignment five years hence as well as now. In making this miller the greatest care is taken thoroughly to season all castings both before and after machining. We carry these frames and parts from six to eight months after work begins on them before the final finishing is done. The result is a tool that is accurate and will stay accurate as long as you use it. For precision work it has no equal.

Longitudinal feed,  $8\frac{1}{2}$  in.; traverse feed, 4 in.; vertical motion of knee,  $8\frac{1}{2}$  in.; table surface,  $3\frac{1}{2} \times 16$  inch.



No. 4 Milling Machine

**BURKE MACHINE CO.**

Conneaut, Ohio

# Special Wood Working Tools

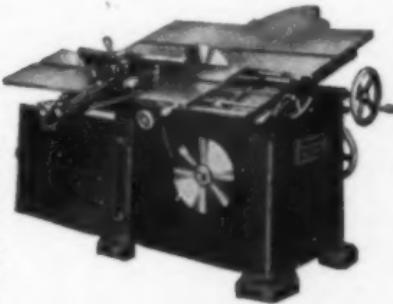
## For Pattern Shops



Machines selected for their precision, and adjustability. Built like machine tools, and designed primarily for pattern shop service.

### "West Side" Band Saw

Steel wheels, which can neither break, warp, twist or spring; under cut hubs; self-oiling bearings; brass-bushed loose pulley; tilting table; all adjustments made by operator without leaving his position. A band saw widely known for its superiority of design and construction.



### Universal Double Saw Arbor

The best word in saw tables for accuracy and convenience. Gauges and adjustments for every possible requirement. A notable improvement upon a type of saw table conceded to be indispensable in every pattern shop.



### Porter 20-Inch Jointer

The highest grade jointer or hand planer in market. Patented guard and safety cylinder; specially grooved tables.

We outfit pattern shops complete, guaranteeing the accuracy and efficiency of every tool. Whether you want a full equipment or a single machine, you will find our service helpful.

*We shall be pleased to have you consult us*

## Chicago Machinery Exchange

Manufacturers' Exclusive Representatives

**159-161 North Canal Street, Chicago**

Can furnish used machines, if desired, carefully rebuilt in our own shops and fully guaranteed.

# WE PREDICT

that all progressive manufacturers producing

## **Spur, Worm and Spiral Gears**

will eventually be compelled to use

## **The New Hobbing Process**

Gears produced therewith *cost less to make*, are *theoretically correct*, and, what is most important,

## **Run Absolutely Noiseless**

This means doing away with all objections existing against gear drive and—transmission, even when used at a very high rate of speed.

Manufacturers of machinery of all descriptions, **Automobiles**, Elevators, Gear Cutting shops cannot afford to be without our

## **Original S. & S. Auto Gear Hobbing Machines**



They  
will  
improve  
and  
perfect  
your  
own  
product

Our new 52 page catalog for the asking

**Schuchardt & Schutte**  
West Street Building, New York

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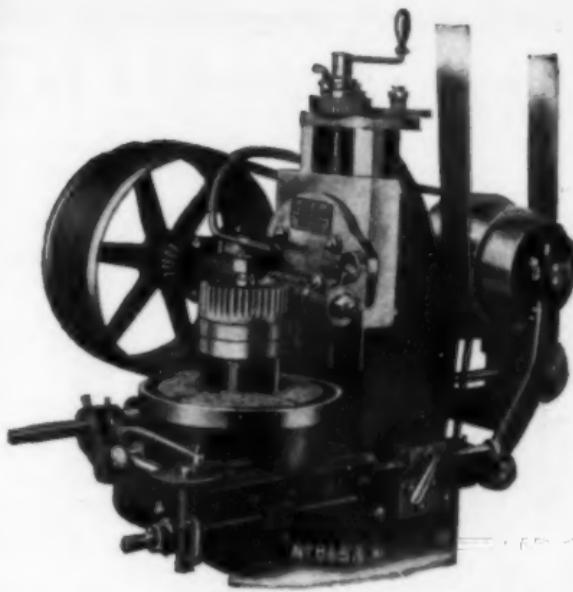
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## **Gear Cutting Prices Have Dropped**

since the **Farwell Gear Hobber** was introduced.

Let us figure on your work and see how cheaply spur gears are cut by the new process.

Don't think about freight. It will pay to ship blanks by express in order to take advantage of our prices.

The machine that effects this saving is described in our circular No. 802-H.

**The Adams Company**

811 Second Street,

Dubuque, Iowa, U. S. A.

# You can get Oil from Your C Cheaper than you think



No. 400—Capacity: 2 Bushels

We also furnish our smaller Oil Extractors with or without stand for and can fit any size Extractor with waste-cleaning attachment if desired. for cost of operation; but **they're all money makers.**

*Why not begin reducing your oil bill right away; we're ready with description,*

**Curtis Oil Extractor Company,**

95 E

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# Your Chips and Shavings from the Oil Man

## The Curtis Ball Bearing Oil Extractor Takes it Out

This machine pays for itself so quickly that it can hardly be called an investment—just a money-making tool that drops dimes and dollars into your pocket from the moment it starts. You can use over and over most of the oil used to lubricate your tools, which it extracts at only a fraction of the cost of fresh oil from the barrel, and it's just as good.

### Pertinent Points

Capacity, two bushels—the largest machine of its kind made.

Power required, 2 h. p.; *labor, only one man.*

Seamless pan, of 5-32 in. sheet steel.

A hoist raises and lowers pan.

Has powerful brake; is fitted with sight feed oiler; has place for pail to catch oil.

Easy to operate and lasts a life-time.

Can furnish with stand for motor drive (with belt), either with or without motor.

Can also furnish with steam attachment for cleaning waste—a good thing if you want it.

And we make two smaller sizes.

or without stand for motor drive, and with or without motors, if desired. The largest machines do the most work.

Send for full description, prices, references and machines--three sizes.

**95 Foster St., Worcester, Mass.**

# The Watson-Stillman Hydraulic Shop Jack

**renders much labor unnecessary**



The wheels on the base, and the handle on the cylinder facilitate moving the jack quickly and without the exertion of much energy. The wheels touch the floor only when the jack is tilted.

This jack can be laid flat and worked horizontally to the entire lifting length of the ram. For lifts from near the ground, an independent steel claw (not shown) may be used. The claw can be removed at other times, so the jack is high for ordinary work.

This jack has the usual Watson-Stillman characteristic of strength, and is safe under a considerably greater load than the rating.

**Made in eleven sizes and up to 50 tons capacity. If it won't do your work, you'll find one among our 450 types and sizes that will.**

*Ask for Jack Catalog No. 68*

**The Watson-Stillman Company**  
Church & Fulton Sts., New York



### **When you install motor drive in your plant--get all the advantages**

Why be satisfied with the ordinary type of motor which *almost* gives the desired results when you can get a *real* adjustable speed motor that *does* give the best possible results—the kind you want.

### **Reliance Adjustable Speed Motors**

will give you all the usual advantages obtained with ordinary motors, such as greater cleanliness, better light, clear overhead space, flexible arrangement of machines, absence of belt and line shaft accidents, ample power at the cutting tool, and the greatest possible power economy.

What is of added importance on your machine tools is the really accurate speed adjustment throughout wide and unbroken ranges in speed. The changes are smooth and gradual—no steps or jumps. You get the right speed for any operation on all kinds of work.

This is all accomplished easily and quickly by a simple mechanical method inside the motor—*no electrical controller is needed.*

### **Reliance Service**

We are not electric motor manufacturers in the ordinary sense of the word but are specialists in complete motor equipments for Machine Shops. We furnish not only the motors but are also prepared to design and manufacture all brackets, gears, etc., for converting your belt driven tools to motor drive.

If you have work on which motors can be used to advantage our Engineers will gladly make a careful investigation of your needs. All we ask is an opportunity to show you what we have to offer as we are confident that sooner or later you will be convinced of the superior merit of Reliance Motors.

*Our Folder No. 10-L is interesting reading for machine tool users.  
Ask us to send a copy*

We manufacture Reliance Constant Speed Motors for either alternating or direct current service.

**Reliance Electric & Engineering Company**  
709 Caxton Bldg., Cleveland, Ohio



PATENTED JANUARY 11, 1910

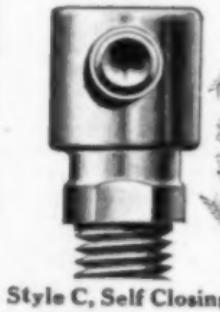
## Caps Won't Jar Off Of Tucker's Positive Lock Compression Grease Cup

For automobiles and all kinds of machinery having excessive vibration. Sample sent by mail on receipt of cash, check or money order.

Made in three sizes

	Price
No. 600 $\frac{1}{4}$ in. $\frac{1}{8}$ in. pipe	\$0.40
No. 691 $\frac{1}{2}$ in. $\frac{1}{8}$ in. pipe	0.50
No. 614 $\frac{1}{4}$ in. $\frac{1}{8}$ in. pipe	0.60

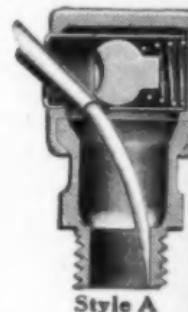
## Tucker's Oil Hole Covers



Style C, Self Closing



Self Closing



Style A



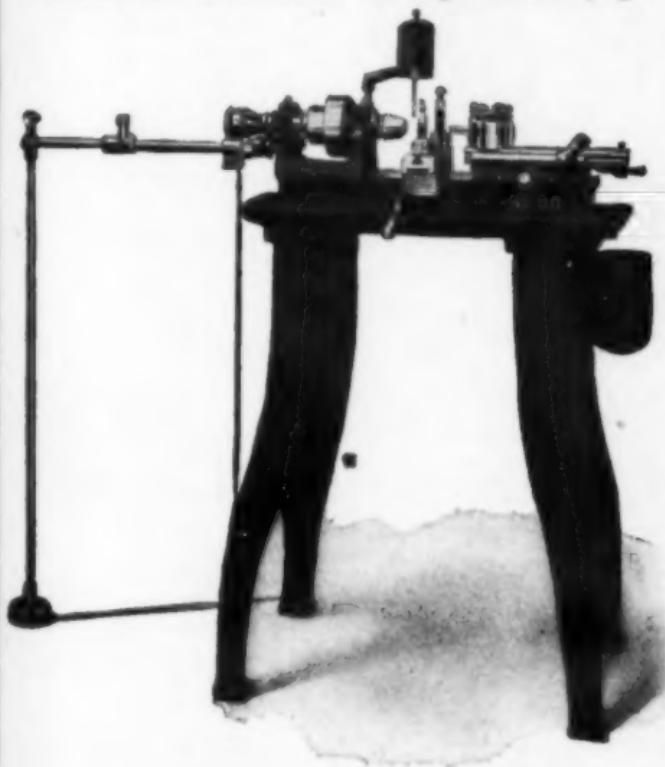
*Send for Catalogue of full line for all kinds  
of machinery having oil holes*

**W. C. & F. C. Tucker,** Hartford,  
Conn.

# Garvin Screw Machines

**The Piece Worker's Choice**

Manufactured by an experienced firm, in five sizes, using the best materials obtainable. Investigate before buying.



**Garvin No. 00 Screw Machine--Wire Feed**  
Capacity 0 to  $\frac{1}{4}$  in. x 2 in. long.

*Send for Catalog "E"*

**CAN SHIP FROM STOCK**

Manufactured By

**THE GARVIN MACHINE COMPANY**  
Spring and Varick Sts., New York City

## Edgemont Friction Clutch Pulleys

Are the Best by Test



They are made to stand the use and abuse clutches are subject to in these times.

Our counter-shaft clutches are adopted by the leading machine tool builders as a part of their machinery, because we have proved by use and test that it is the strongest and simplest clutch made.

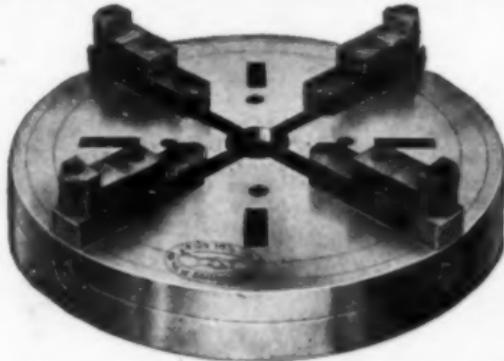
We also make special clutches for all purposes. Tell us your wants, and we will make a clutch to suit your conditions.

Friction Clutches with Extended Sleeves for any Standard Steel or Wood Pulleys.

*Our catalog for your card*

The Edgemont Machine Co., Ft. of Mound Street,  
DAYTON, O.

## Combination Chucks



Reversible Jaws, and made for ordinary machine shop work.

**Union Manufacturing Company**  
New Britain, Conn.

26 Cortlandt St., Makers of a complete line of CHUCKS  
New York

# *Rogers' "Talks"*



## **The Rogers Adjustable Thread Cutting and Milling Tool**

**T**HIS little bit of concentrated "horse-sense" has won to itself a host of enthusiastic friends by reason of the character, quantity and wide range of the work it turns out. It "stands up" to a heavy cut as staunchly as a single piece milling tool, is quickly adjusted and so simple in its build as to be altogether "fool-proof."

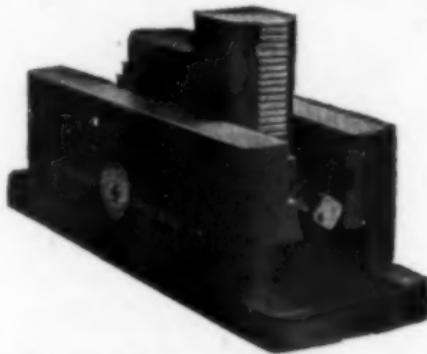
May we send you details of it in our very complete small tool catalogue?

This tool really merits your "looking up."

***The John M. Rogers Works***  
***Glooucester City, N. J.***

## FACE PLATE JAWS

with Patented Hardened Steel Bushings  
are a good substitute for large chucks.



**THE CINCINNATI CHUCK CO., Cincinnati, Ohio**

Chicago Branch:  
11 N. Canal St.

New York Branch:  
136 Liberty St.

## The Sweetland Geared Scroll Chuck

WITH SOLID REVERSIBLE JAWS

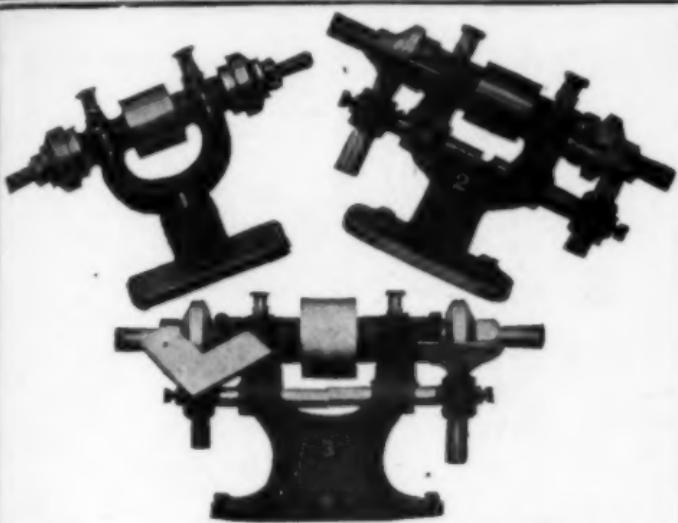
Renders 2 sets of jaws unnecessary

Is cheaper than a chuck with 2 sets



Is more simple and much superior  
Chucks guaranteed; we invite a trial

**THE HOGGSON & PETTIS MFG. CO., New Haven, Conn.**



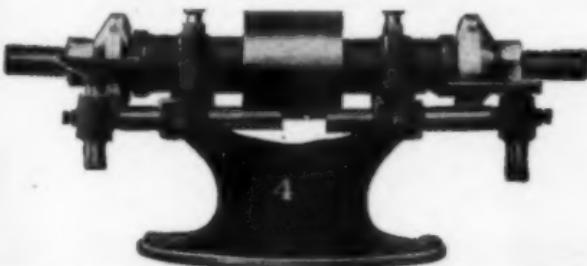
## Partridge Emery Grinders

Here are four well-made Bench Grinders, adapted to light, medium and heavy work. Also furnished mounted on column. In addition, I make a high-grade heavy Floor Grinder of the cabinet type, thus being able to meet all demands for this class of tools. They are all well built, of the right materials, and have features of excellence that will interest you.

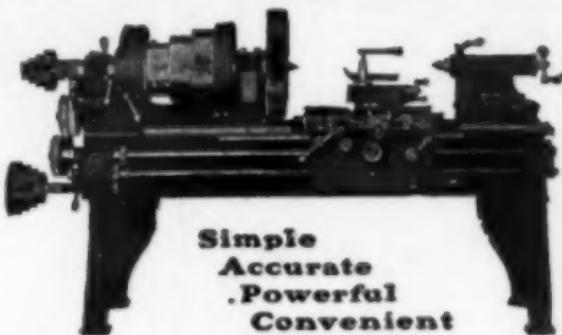
*Tell me your needs in this line, and I will gladly mail full description and quote interesting price*

**E. O. PARTRIDGE**

2047-9 Lake Street, - - - CHICAGO  
Also Foot Presses and Tapping Machines



## Standard Engine Lathes



**Simple  
Accurate  
. Powerful  
Convenient**

Furnished with either standard 5-step cone or with 3-step cone double-back-geared, **carrying a wide belt**, with 18 speeds and wide feed range.

**GREAVES, KLUSMAN & CO**  
Cincinnati, Ohio, U. S. A.

### WHEN YOU INQUIRE

of advertisers herein, won't you kindly remember to say somewhere in your communication that the inquiry comes from Hitchcock's Machine Tool List? Advertisers are human; they like to know that the medium in which they spend their money is received and consulted by machinery users. Not being mind readers, they can only know this when you tell them, and if you neglect to tell them, the Tool List is deprived of credit for the service it has rendered.

There are several tapping operations which you are now doing with solid taps on your Drill Press or Turret Lathe where

## Geometric Collapsing Taps

would do the work better, and in half the time.



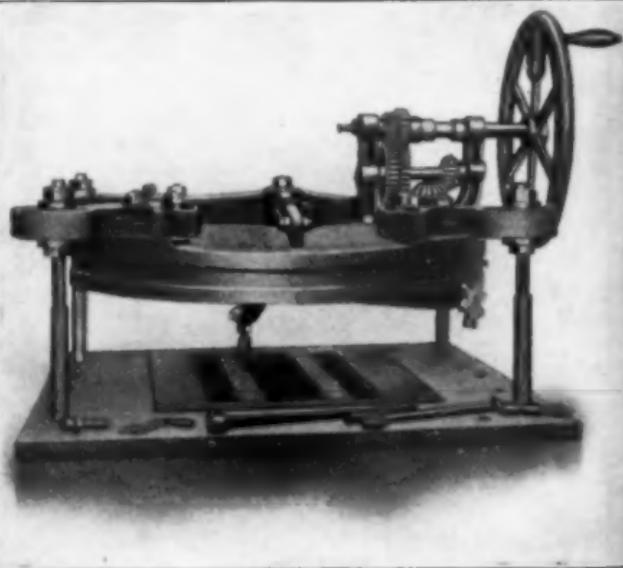
**Geometric Collapsing Taps** are as rigid as solid taps while cutting, but collapse their chasers automatically at the end of the cut, and there's no reversing required to back them out.

*We will be glad to tell you more  
about them, if you will tell  
us your requirements*

**The Geometric Tool Co.**  
New Haven, Conn., U. S. A.

# Improved Portable Valve Seat Rotary Planing Machine

WHEN YOU come to see the remarkable saving in time, (and money) this portable tool makes possible, you will no longer think of moving the house to the carpenter's shop for repairs—it doesn't pay.



## Built in Six Sizes

THIS ACCURATE, handy tool, though at first designed to face off locomotive valves, was soon used on a large variety of other work, and gave perfect satisfaction. Planes any surface up to 42 in., diagonal measurement, and is readily attached to almost any shape. The machine work is perfect, requiring no filing or scraping afterwards, and there is no breaking of port edges.

*Write for our comprehensive Catalog of Portable Tools;  
it's a guide to many good things*

**H. B. Underwood & Company**  
1022 Buttonwood St., Philadelphia, Pa.

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## Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. Prices and full descriptions of the machines listed will be furnished by the parties offering them for sale. If you do not find what you require, use the slip inclosed with each book to make known your wants to the publisher.

### FOR SALE BY

#### Wm. E. Gang Co., 1543-1547 Queen City Ave., Cincinnati, Ohio.

Engine, boiler and pump, second-hand.

Engine and boiler, including one 9x16 Lane & Bodley engine, left hand, self contained, band wheel 54x12, shaft 4 7-16x28, governor with automatic stop, throttle valve, s.-f. cylinder lubricator, etc.; one vertical submerged tubular boiler, 48x120, with base, grates, doors, etc.; coil of National type heaters, with piping fittings and valves, 3 in. B. P. valve, tee and plug; Laidlaw-Dunn-Gordon 3x2x3 duplex piston pump, brass fitted.

Gear cutter, 30 in. G. & E. regular type automatic, for light and medium classes of work, with automatic oil pump, sub-base, 4 step cone, complete set of change gears, work and cutter arbors and centers; excellent condition.

Radial drill, 2 1/2 ft. W. E. G. Co., with plain box table and speed box, later design than our regular machine; used in our shop; good condition.

Turret lathe, 18 1/2 in. Dreses & Mueller, with power feed, friction back gears, oil pan, pump and piping, cut-off rest, longitudinal feed, 2 9-16 in. hole thru spindle, 3 step cone for 3 1/2 in. belt, 2 friction pulleys on c. s; good condition.

### FOR SALE BY

#### The Chicago House Wrecking Co., W. 35th and Iron Sts., Chicago.

##### MISCELLANEOUS.

Boilers, fire box, 70 h.p. Economic, (2).

Boiler, fire box, 60 h. p. Economic.

Boiler, internally fired, 40 h. p. Atlas.

Boilers, butt strap, 72 in. x 18 ft., 130 lbs., (4).

Boilers, butt strap, 66 in. x 16 ft. 125 lbs., (6).

Boilers, lap joint, triple riveted, 78x20, 115 lbs., (4).

Boilers, lap joint, quadruple riveted, 72x20, 100 lbs., (12).

Boring mill, 8 ft. Niles, single head.

Drill press, 36 in. Prentiss, bk. gd.

Drill press, 30 in. Prentiss, bk. gd.

Drill press, 20 in. Silvers, bk. gd., new.

Drill press, 4 1/2 ft. Gang, plain radial.

Drill press, 4 1/2 ft. Universal, pl. radial.

Gasoline engine, 20 h. p. Bates & Edmonds, new.

Gasoline engine, 8 h. p. Bates & Edmonds.

Jaw crusher, 9x14 Gates.

Locomotives, 9x16 Baldwin 36 in. gauge, (2).

We have large machine shops, and every engine, boiler and machine is thoroughly overhauled and tested before leaving our plant. In addition we have structural iron, pipe, shafting, pulleys, corrugated roofing, steel and metal ceiling and siding, lumber, mill work, complete plumbing outfits for factories and public buildings, office and parlor furniture. Send for new 500 page catalog No. 889. Free on request.

40 telephones, all Yards 1900.

Mortiser and borer, hor. Greenlee.

Punch and shear, combination, Doty.

Pump, duplex, 14x8 1/2x10 Laidlaw-Dunn & Gordon.

Pump, duplex, 12x7x12 Smith-Vaile.

Pump, duplex, 10x6x10 Dean.

Pumps, duplex, 6x4x6 Dean, new, (5)

Pumps, duplex, 4 1/2x2 1/2x4 Dean, new, (12).

Pumps, duplex, 3x2x3 Dean, new (7)

Resaw, band, 44 in. McDonough.

Shaper, 24 in. Wetherill, crank.

Belting, 500,000 feet of bargains in brand new and used leather, rubber and canvas belting, all sizes and widths, at prices that mean a positive saving of 50 to 75 per cent. Send for complete belt list No. 78.

Steel tanks:

1000 gallon capacity (12).

1500 gallon capacity (42).

3000 gallon capacity (12).

3600 gallon capacity (15).

3800 gallon capacity (2).

## SECOND-HAND MACHINERY

### FOR SALE BY

**C. C. Werner Mach'y Co., 94-96 W. Woodbridge St., Detroit, Mich.**

#### POLISHING AND BUFFING MACHINERY

Sgl. end bench polisher.  
No. 6 Blount, overhanging arm, new.  
No. 6 Blount buffer, new.  
No. 7 Blount buffer, on col., new.  
No. 3 Blount combination, new.

1 in. spdl. sgl. end bench polisher.  
No. 5 Blount buffer, new.  
14 in. Middleditch polisher, new.  
No. 1 Blount combination, new.  
Belt strapping attach., Blount, new.

#### GRINDING MACHINERY

48 in. automatic knife grinder.  
Wet emery grinder, 32 in. wheel.  
No. 6 Diamond wet emery.  
Rod grinder, 34 in. centers.  
No. 3 Ruby bench emery.  
No. 26 Huntington suspended, double end.

32 in. Union knife grinder.  
No. 2 Diamond wet tool grinder.  
No. 1 Diamond bench wet grinder.  
No. B Challenge dbl. end, emery.  
No. 5 Diamond, dbl. end on col.  
No. 8 Buckeye twist drill grinder, new.

#### FORGES, BLOWERS, FANS

Roots rotary hand blower.  
21 in. hearth forge.  
7 in. outlet Sturtevant blower.  
40 in. disc ventilator.  
No. 32 Buffalo blast forge.  
18 in. hearth Silver forge, new.

60 in. Fuller disc ventilator.  
No. P-2 Canedy blower.  
21 in. Huyatt forge blower.  
No. 6 Roots hor. cupola blower.  
No. 2 Sturtevant volume blower.  
18 in. hearth Champion forge, new.

#### KEYSEATERS

No. 0 Mitts & Merrill, 7 in. stroke.  
No. 0 Mitts & Merrill, variable st.

12 in. Morton, crank motion.  
No. 1 Davis, 4 in. stroke.

#### TAPPING MACHINES

10 in. Baker, style K-11.  
4 in. Besly, bench.  
Ferry auto., nut tapper, 4 in.  
No. A Burke, bench, new.

4 in. Besly, bench.  
4 in. bench tapper.  
1 in. Ohio hand nut tapper.  
No. D Burke, bench, new.

#### CHAIN MACHINERY

Chain block reamer, 6 in. to 4 in.  
2-spindle Garvin stud machine.  
Riveter, 2-16 in. Shuster.  
Hand chain testing machine.

Chain rivet spinner, 2 spindle.  
Automatic chain stud machine.  
Hand chain stretcher.  
Hollow rivet setter.

#### FURNACES

No. 1 Stewart oven muffle, new.  
Gas furnace for soldering.

Stewart comb. furnace & blower.  
No. 6 American, soft metal.

#### MISCELLANY

Air drill, No. 3 Little Giant.  
Air hoist, 73 in. x 2 ft. stroke.  
Anvil, 107 lb. Horn.  
Anvil, 125 lb., steel faced.  
Balancing ways, No. 2 Bowsher.  
Beader on col., power.  
Belting, leather, 2 to 8 in. wide.  
Blacksmith bellows; 3 to 6 in. vises.  
Boring mill, 9 ft. Sellers.  
Centering machine, Slocumb.  
Chucks, all sizes, lathe and drill.  
Cleaner, No. 27 Clipper.  
Cold saw, No. 11 Higley.  
Cornice brake, 8 ft. Ohl.  
Countershafts, all sizes.  
Crank turning machine, 7 in. cap.  
Crimper, No. 1 Bliss, double head.  
Cutter grinder, Pratt & Whitney.  
Cutting-off mach., 4 in. Hurlbut & R.  
Divid'g hd. & tailst'k, 10 in. Garvin.  
Drilling head, No. 4 Stowe.  
Filer and hack saw, Simplex, bench.  
Fire extinguisher, Standard.  
Former & beader, No. 2 Bliss bench.  
Friction clutch, 36x16x3 7-16 in.

Gear cutting attachment for lathe.  
Gear hobber, No. 1 Farwell, new.  
Hangers, 10 to 24 in. drop, miscellany.  
Lock seamer, Erdman & Kerches.  
Magnetic separator, Sawyer.  
Machine heads for valve miller.  
Pinion cutter, No. 1 Slate, auto.  
Plating tank, 26x26x19 in.  
Plating plant equip., miscellany lot.  
Pulleys, wood split, 3 to 64 in.  
Safe, 30x36x26 Barnes.  
Scale, 30,000 lb., hopper, Fairbanks.  
Shafting, 1 3-16 in. to 2 15-16 in.  
Slide rest for speed lathe.  
Soldering machine, 8 ft. long.  
Tire upsetters, Ideal and Detroit.  
Tire shrinker, No. 1 Wylie & R.  
Tire benders (\$).  
Tire welder and shear, No. 4 L. & A.  
Tube cutter on column.  
Tube cutter, roller, 3 in. disc.  
Tumbling barrel, wood frame.  
Turret attachment, 4 spindles.  
Valve miller, 6 spindle.  
Worm cutting mch., Kal. auto.

Prentiss

13x5 Roler  
er cross  
14x8 Lodge  
15x6 Flat  
cross fe  
16x8 Dra  
cross fe  
18x6 Flat  
cross fe  
18x8 Hen  
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No. 4 Bro

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Baker Bro  
28 in. New

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18 in. Henc

12 in. Goul

4 in. No. 3

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24x24x5 Go  
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30x30x8 Cir

50 lb. Brad

Cold saw, 3  
Cold Saw,  
Engine, gas  
Engine, ste  
Gear cutter  
Eberhard  
Grinder, un  
Keyseater,

## SECOND-HAND MACHINERY

### FOR SALE BY

**Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse  
LATHES.**

18x5 Robbins, compound rest, power cross feed.	27x12 Pratt & Whitney, plain rest.
18x6 Lodge & Shipley, patent head.	28x28 plain rest.
18x6 Flather, compound rest, power cross feed.	28x28 shafting lathe.
18x6 Draper, compound rest, power cross feed.	30x10 Putnam, compound rest, power cross feed.
18x6 Flather, compound rest, power cross feed, taper.	36x12 Pond, compound rest, power cross feed.
18x8 Hendey, plain rest, power cross feed.	36x16 Reed, compound rest, power cross feed.
18x10 Perkins, compound rest, power cross feed.	32x17 Bement, triple geared, compound rest.
18x8 Fay & Scott, compound rest, power cross feed.	37x18 Sellers, compound rest, power cross feed.
21x12 Gleason, compound rest, power cross feed.	38x14 New Haven, compound rest power cross feed.
21x10 Hendey-Norton, compound rest, taper attachment.	38x20 Fay & Scott, compound rest, power cross feed.
21x12 Finfield, compound rest, power cross feed.	40x18 Newark, triple geared.
21x14 Perkins, compound rest, power cross feed.	42x26 American, triple geared.
	84x20 compound rest, power cross feed.
	103x35 Bement, triple geared.

### MILLERS.

No. 1 Pratt & Whitney, plain.	No. 13 Brown & Sharpe, plain.
No. 2 Brown & Sharpe, vertical.	No. 24 Brown & Sharpe, plain.
No. 2 Hendey, plain, back geared.	No. 4 Burke, bench.
No. 4 Brown & Sharpe, plain.	No. 1 Cooper Bros. die sinker.

### DRILLS.

16 in. style F, Baker Bros.	60 in. Bickford, stationary head.
21 in. Snyder, back geared & power feed.	5 ft. Bickford, universal radial.
25 in. Prentiss Bros., back geared.	5 ft. Niles, universal radial.
Baker Bros. high speed.	2 spindle Fox, sensitive.
28 in. New Haven, sliding head.	No. 1 Barnes horizontal.

### SHAPERS.

18 in. Pratt & Whitney.	18 in. Putnam, friction.
18 in. Hendey, friction.	26 in. Lodge & Davis, shifting belt.

### GEAR CUTTERS.

11 in. Gould & Eberhardt, hand.	26 in. Brown & Sharpe, automatic.
---------------------------------	-----------------------------------

### AUTOMATIC SCREW MACHINES.

1 in. No. 52 National-Acme.	1 in. "K" Hartford.
-----------------------------	---------------------

### PLANERS.

24x16x4 Hendey, 1 head.	32x32x8 Pease, 1 head.
24x24x5 American, 1 head.	33x33x8 Betts, 1 head.
24x24x5 Gould & Eberhardt.	48x48x16 Sellers, two heads.
24x20x6 Pond, 1 head.	54x48x16 Pond, four heads.
24x30x8 Cincinnati, 1 head.	81x54x16 Betts, 1 head.

### HAMMERS.

50 lb. Bradley, compact.	1000 lb. Pratt & Whitney, drop.
--------------------------	---------------------------------

### MISCELLANEOUS.

Cold saw, 24 in. Newton.	Pipe machine, 2 in. Bignall & Keeler.
Cold Saw, No. 21 Higley.	Pipe machine, 3 in. Jarecki.
Engine, gas, 8 h. p., Fairbanks.	Profiler, 1 spindle, Garvin.
Engine, steam, 8x10 in. Ide.	Screw machine, 18 in. Spencer, automatic, double end.
Gear cutter, 60 in. x 12 ft. Gould & Eberhardt.	Slotter, 13 in. Bement.
Grinder, universal, No. 2 Landis.	Slotter, 16 in. Bement, crank.
Keyseater, No. 1 Davis.	

## SECOND-HAND MACHINERY

### FOR SALE BY

**The H. A. Stocker Machinery Co., 565-72 W. Randolph St., Chicago**

#### TURRET LATHES AND SCREW MACHINES

2x24 Jones & Lamson flat turret, single drive, geared heads, latest type, including attachments, good condition (2).  
2x24 J. & L. flat turret, 1896 pattern, outfit of tools, splendid working order.  
20 in. Fay & Scott universal turret, complete, practically good as new.  
22 in. No. 4 Potter & Johnston double turret, used less than a year.  
21 in. Gisholt turret lathe, new in 1907, good order.  
24 in. Cleveland auto. screw mch., bought new in 1907, good working cond.  
24 in. Cleveland automatic screw machine, present pattern, good order.  
No. 00 Brown & Sharpe automatic, latest pattern.  
No. 51 National-Acme automatic screw machine, latest pattern, never used.  
1 in. Brown & Sharpe automatic screw machine, 1891 pattern.  
No. 2 Brown & Sharpe screw machine, wire feed, automatic chuck.  
No. 4 Bardons & Oliver, 16 in. wire feed capacity.

#### MILLING MACHINES.

No. 4 Brown & Sharpe, universal.  
No. 1 Cincinnati universal, 1902.  
No. 1 Garvin universal.  
No. 2 Brown & S., plain, geared fds.  
No. 1 Brown & S., plain, geared fds.  
No. 24 Brown & Sharpe, plain.  
No. 18 Kempsmith plain, back gd.

#### GEAR CUTTERS

30 in. Gould & Eberhardt auto., for spur, bevel and skew gears, good as new.  
42 in. Gould & Eberhardt auto., for spur gears only, 1899 pattern, good order.  
26 in. No. 3 Brown & Sharpe automatic, fine condition.  
Grant-Lees worm gear hobbing machine, just like new.  
Dwight slate automatic pinion cutter.

No. 1 Whiton, spur and bevel.

#### LATHES

50x20 New Haven, triple geared.  
32x12 Schumacher & Boye.  
30x16 Flather.  
24x18 Fitchburg.  
24x16 Fitchburg.  
28 Lathes, 10 to 18 in. swing, 4 to 12 ft. bed, assorted makes.

#### RADIAL AND UPRIGHT DRILLS

6 ft. Bickford, gear box drive.  
5 ft. Bickford, gr. box & motor dr.  
5 ft. Western, cone drive, universal.  
4 ft. Bickford, cone drive.  
About 20 drills, 24 in. and smaller.

#### PLANERS.

48x48x20 Bellmer, 4 heads, quadruple geared, fine condition.  
48x42x12 Pond, 2 heads, rebuilt.  
36x36x12 Gray, 2 hds., A-1 cond. (2).  
36x36x12 Cincinnati, 2 heads., just about good as new.

#### SHAPERS.

20 in. Cincinnati, back gd., crank.  
20 in. Smith & Mills, geared.

#### KEYSEATERS.

60 in. Morton, portable.  
48 in. Morton.

#### GRINDING MACHINES.

18x96 in. Norton plain, complete, little used.  
Milwaukee wet tool grinder.  
Whitney wet tool grinder.  
Sellers tool room grinder for lathe, planer and shaper tools, also twist drill attachment.  
No. 2 Brown & Sharpe surface grinder, with magnetic chuck.  
No. 1 Landis universal, fine order.  
No. 16 Landis plain, splendid condition.

## SECOND-HAND MACHINERY

(The H. A. Stocker Machinery Co.—Continued)

### POWER PRESSES.

No. 85 Bliss, gd., 2 bolster plates.	No. 3 Perkins.
No. 4 American Can, o. b., inc.	No. 2 American Can (2).
No. 3 American Can, o. b., inc.	1200 lb. Merrill, drop hammer.

Full line Walah new presses always in stock.

### BORING AND TURNING MILLS.

10-16 ft. Niles, 2 heads, motor drive, large assortment of attachments.
76 in. Bullard, 2 heads and central boring head, table fixtures.
42 in. Bullard, single swivel turret head, chuck table, thread cutting.
36 in. old style, good for pulley work, will sell cheap.
42 in. Niles car wheel borer, with crane and chuck table.

Niles horizontal, like new.

No. 3 Niles horizontal, long feed to bar.

### PUNCHES AND SHEARS

42 in. throat Bement single end punch and shear, cap. 4x1 $\frac{1}{2}$ in.
36 in. throat Humphrey single end punch and shear, cap. 1 $\frac{1}{2}$ x1 $\frac{1}{2}$ .
No. 4 Cincinnati single end, 8 in. throat, cap. 4x $\frac{1}{2}$ in.

This list includes only a part of our stock, and besides, we list for sale odd tools belonging to customers; therefore, if you favor us with your inquiries, no matter what you want in the machine tool line, we can most likely locate it for you.

## FOR SALE BY

A. D. White Machinery Co., . 108-114 N. Jefferson St., Chicago.

### LATHES.

9x42 in. Shepard, hollow spindle.	16x32x16 Fay & Scott, ex. gap.
14x6 Putnam, r. & f., cheap.	18x8 LeBlond c. r. h. s.
16x6 Flather, comp. rest & h. s.	20x12 LeBlond c. r. h. s.
16x6 Shellenbach, comp. rest & h. s.	20x12 Flather, comp. rest & h. s.
16x8 Davis, compound rest, hollow spindle.	28x25 Putnam, compound rest.
	30x10 Powell, compound rest.

### SCREW MACHINES AND TURRET LATHES.

No. 60 Brown & Sharpe, automatic, turret forming (2).	1 in. Costillo, hand.
1 in. Cleveland, automatic.	2 in. American, a. c. & w. f.
1 in. Pratt & Whitney, automatic (5)	2 in. Cleveland, automatic.
1 in. Cleveland, automatic.	18 in. Davis & Egan, 2 $\frac{1}{2}$ in. h. s.
	16 in. Windsor, raised to 24 in.

### DRILLS AND BORING MACHINES.

6 spindle Fox, sensitive drill.	33 in. Cincinnati, p. f. & b. g.
20 in. Mechanics friction drill.	42 in. Niles mill, 2 heads, new.
28 in. Barnes, p. f. & b. g.	10 ft. Niles boring mill, 2 heads.

### MILLING MACHINES AND GEAR CUTTERS.

No. 2 Brown & Sharpe, universal.	No. 5 Becker vertical miller.
No. 2 P. & W. hor., adjustable head.	30 in. G. & E., automatic.
No. 2 Garvin, Lincoln.	36 in. Fellows, gear shaper.

### PLANERS AND SHAPERS.

16 in. Gould & Eberhardt, b. g.	24x6 Pend planer.
16 in. Smith & Mills, geared.	30x30x8 Powell.
16 in. Steptoe, plain crank.	32x32x12 Niles 2 heads.

### GAS ENGINE.

We offer for quick sale one 29 h. p. Columbus Gas Engine, with muffler. Has been used but a very short time and is in excellent condition, practically as good as new. Spot cash, \$250. If you need an engine, get in on this quick!

### MISCELLANEOUS.

Hammer, steam, double frame, 650 lb.	Hammer, power, 50 lb. Fairbanks.
Morgan & Williams.	Keyseater. No. 0 Mitts & Merrill.
Hammer, steam, single frame, 2,000 lb. Monighan.	Press, toggle, No. 1 $\frac{1}{2}$ Bliss.

Our latest "Yellow Book" is ready. You can have it regularly if you'll drop us a postal card.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Niles-Bement-Pond Company, . . . . . 111 Broadway, New York,  
Located at Chicago, Boston and New York.**

#### LATHES.

12x6 Champion, compound rest.  
14x6 F. B. Miles, compound rest.  
16x6 speed lathe.  
14x5 American, square arbor....\$ 50  
16x6 Fitchburg, compound rest.  
18x6 Blaisdell, rise and fall rest.  
19x6 D. W. Pond, turret tool post.

21x6 Bridgeport, turret boring.  
21 and 48 in. Harrington, gap, boring  
and chuck.  
21x8 Star, turret carriage.  
22x16 Fitchburg.  
32x10 Pond, compound rest.

#### TURRET MACHINERY.

1 in. No. 1 Garvin, wire feed....\$125  
1 in. No. 0 Pratt & W., wire feed.  
1 in. No. 1 Costello, wire feed....\$165  
24 in. Conradison, semi-automatic.  
28 in. size J, Gisholt.  
1 in. No. 00 Hartford, Pratt &  
Whitney, automatic..... 275

1 in. No. 0 Hartford, automatic....\$225  
1 in. National Acme, 4 spindle  
automatic..... 150  
1 in. No. 1 Spencer, single turret,  
automatic..... 150  
21-32x1½ in. No. 2 Brown & S.,  
automatic..... 350

#### SHAPERS AND PLANERS.

15 in. Hendey, friction.  
18 in. Cincinnati, dbl. hd., traverse.  
17x17 in. x4 ft. Whitcomb.  
28x26 in. x6 ft. Pond.

26x23 in. x16 ft. Ferris & Niles, 2 hds.  
30x30 in. x24 ft. Sellers, 2 heads.  
32x32 in. x14 ft. Niles.  
48x48 in. x 16 ft. Belmar Eames, 4 hds.

#### DRILLS.

9 in. No. 1 Pratt & Whitney, bench.  
13 in. No. 1 sensitive friction, 110 volt,  
d. c. motor.  
30 in. Gould & E., sliding head.  
36 in. Gould & E., sliding head.  
48 in. Niles, sliding head.  
Prentiss port, univ. rad., cap. 2 in.  
3 ft. Gair, plain radial.....\$200  
4 ft. 6 in. Barr, plain radial..... 200  
5 ft. Niles, semi-universal.  
5 ft. 6 in. Niles, outboard col.

6 ft. 10 in. Niles No. 2, semi-univ.  
7 ft. 6 in. Niles No. 5, full univ.  
10 in. 2 spindle slate, sensitive.  
12 in. 2 spindle Foote-Burt, sensitive.  
14 in. 3 spindle Garvin, gang....\$ 50  
14 in. 4 spindle D. P. N..... 75  
17 in. 4 spindle J. & L., gang.... 75  
14 in. 6 spindle No. 3 Garvin, gang.  
6 spindle special Langelier.  
No. 10 10 spindle Pratt & Whitney,  
cap. 1 15-16 in., 220 v., d. c. motor.

#### BORING

26 in. No. 2 Brown & S., vert. turret.  
37 in. Bullard, vertical, 2 heads.  
21 in. Pond, 3 heads.  
Kelly horizontal, 2 in. spindle.

MILLS.

Nicholson & Waterman boring ma-  
chine, 3 in. spindle.  
Bement & Son horiz., 2½ in. spindle,  
Stearns 96 in. special cylinder borer.

#### GRINDERS.

14x2 in. Gould & E., water tool....\$ 25  
18x2 in. Pedrick, double wet tool..... 20  
24x3 in. Pedrick, double wet tool..... 75  
20x1½ in. Ransom, water tool.....  
3 in. Sellers drill grinder.

Diamond polishing stand.....\$ 15  
No. 0 Northampton polishing jack.  
Swing frame grinder and polisher.  
Diamond.....\$ 65  
No. 1 Blount.

#### MILLING MACHINES.

No. 2 Brown & Sharpe, universal,  
20x10x16 in.  
No. 2 Garvin, plain, 31½x5x16 in.  
No. 4 Brown & Sharpe, universal,  
40x7x2 in.

No. 4½ Becker-Brainard, plain, 24x7x  
16 in.  
Garvin single spindle profiler,  
table 21x24 in.....\$250  
1 in. Garvin hor. screw slotted....40

#### MISCELLANEOUS.

Arbor press, power, 3 in. screw....\$ 50  
Bicycle tube hand rolls..... 20  
Brazing furnace, gasoline, 24x16 in.  
Cut-off machine, 28 in. Betts....\$ 75  
Cut-off machine, 32 in. H. & R.... 50  
Hack saw, No. 2 Robertson.  
Hammer, power, 350 lb. Lingle.  
Forging machine, 2 in. Blakesle.  
Iron forge on legs, 28x13x8 in.... 25

Planer vise, 16x32 in..... 25  
Planer vise, 10x2 in., swivel base..... 20  
Press, bench, No. 0 Stiles pattern.  
Punch and shear, combination,  
power, 1 in. capacity.....\$ 25  
Spiral spring winding machine, Shuster.  
Tapping machine, horizontal, No. 1  
Garvin.  
Vulcanizer, rubber, Hartford, small.

## SECOND-HAND MACHINERY

### FOR SALE BY

Marshall & Huschart Machinery Company,

11-13-15 N. Canal St., Chicago. 45-47 S. Capitol Ave., Indianapolis,

908 N. Second St., St. Louis. 309 Railway Exch., Milwaukee.

#### BOLT CUTTERS.

1½ in. Webster & Perks, double head.

1½ in. Economic, single head, complete, almost new.

2 in. Acme, single head.

#### BORING MILLS.

No. 1 Bissell horizontal, 2½ in. bar.

24 in. Colburn, swivel turret head, geared feed, 3-jaw combination chuck.

24 in. Bullard, single turret head, 3-jaw combination chuck.

10-16 ft. Niles extension, two regular heads, one extension head.

14-20 ft. Niles extension, with two regular heads on cross rail.

#### DRILLS.

2 ft. Economic plain radial, cone drive, plain table.

4 ft. No. 1 Bickford, full universal, cone drive, plain table, tapping attachment (equal to new).

20 in. W. F. & John Barnes, stationary head, wheel and lever feed.

28 in. Aurora, sliding head, p. f., a. s., b. g.

40 in. sliding head, hand wheel feed.

Small Barnes friction drive.

Two spindle rim drill.

#### GEAR CUTTERS

D. F. Whiton 36 in. automatic, spur gears only (used two months).

40x9 in. Goulet & Eberhardt, spur gears only.

#### GRINDERS.

No. 50 Saxon, cylinder.

No. 3-A Landis universal, all regular accessories.

Barnes water tool.

Garvin cutter grinder.

No. 2 Brown & Sharpe, cutter.

No. 7 Banson double emery.

American twist drill.

#### HAMMERS.

100 lb. Mayer Brothers "Little Giant" trip hammer (new).

800 lb. Monighan, single frame, steam.

#### LATHES.

16 in. x 8 ft. Flather, plain rest, hollow spindle, taper attachment.

18 in. x 6 ft. Lodge & Davis, hollow spindle, plain rest, 3 jaw chuck.

18 in. x 8 ft. American, compound rest, hollow spindle, quick change gear, two chucks fitted.

26 in. x 12 ft. Reed, hollow spindle, compound rest, chuck.

29 in. x 26 ft. Ames, solid spindle, plain rest, chuck.

42-61 in. x 16 ft. Ames, triple geared, compound rest, power angular feed.

#### TURRET LATHES.

28 in. Pond, rigid turret.

42 in. New Haven.

22x24 in. Jones & Lamson, flat turret.

No. 4 Windsor, back geared, cut-off rest, oil pan, chuck, countershaft.

#### MILLING MACHINES.

Hilles & Jones, vertical.

Small Kempsmith, plain, hand and power feed.

15 in. x 8 ft. Keystone slab miller.

No. 3 Becker-Brainard, plain, gd. fd.

No. 3 American Tool Works, plain, power longitudinal and cross feeds.

No. 5 Becker, vert., all power feeds.

#### PLANERS.

28x24x6 Ohio, one head.

28x24x6 Powell, one head.

28x24x7 New Haven, one head.

28x27x7 New Haven, one head.

27x27x8 Fitchburg, one head.

30x30x8 Whitcomb, one head.

36x36x8 Enterprise, one head.

36x36x10 Pratt & Whitney, one head.

#### SHAPERS.

18 in. Juengst.

20 in. Rockford, back geared, table support, vise.

24 in. Steptoe, shifting belt.

24 in. Walter Bros.

32 in. Steptoe, triple geared.

#### MISCELLANEOUS.

Keyseater, Morton.

Keyseater, No. 2 Baker (Colburn).

Slotters, 10 in. Putnam, with circular table.

## SECOND-HAND MACHINERY

### FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.,

210-212 Washington Ave.

St. Louis, Mo.

16x6 Fitchburg.  
24x14 Lodge & Shipley.  
24x12 New Haven.  
25x26 New Haven.

#### LATHES.

30x12 Lodge & Shipley.  
48x34 Niles, triple geared.  
50x16 New Haven, triple geared.

22 in. sliding head.  
24 in. Cincinnati, with tapping att.  
28 in. Barnes.

#### DRILLS.

30 in. Lodge & Davis.  
5 ft. plain radial.  
6 spindle Quint.

24 in. Gould & Eberhardt shaper.  
24 in. Smith & Mills shaper.  
26x26x6 New Haven planer.

#### PLANERS AND SHAPERS.

30x30x8 Whitcomb planer.  
36x36x12 New Haven planer.

7 in. throat No. 6 Queen City punch,  
capacity  $\frac{1}{2}$  in.  
Bending rolls, 8 ft., drop end, 7 in.  
diameter.  
Bending rolls, 8 ft., 10 in. diameter.  
Bending rolls, 10 ft., drop end,  
Wicks Bros.  
Boring mill, 34 in. Colburn.

#### PUNCHES AND SHEARS

18 in. throat No. 5 Long & A. punch.  
48 in. throat heavy splitting shear.

#### MISCELLANEOUS.

Column facing lathe, double head.  
Hammer, 90 lb. Justice.  
Keyway cutter, No. 6 Morton.  
Pipe machine, 12 in. Bignal & Keeler.  
Press, No. C-2 Ferracute.

### FOR SALE BY

Western Machinery Co., - 6th & Baymiller Sts., Cincinnati, O.

#### LATHES.

14x5 Bradford, p. r., hol. spindle.  
14x6 Silk-Anderson, compound rest,  
hollow spindle, taper.  
15x5 Warner & Swasey brass lathe.  
20x14 Steptoe, r. & s., \$190.  
21x8 Pratt & Whitney, c. r., hol. spdl.

21x9 Pratt & Whitney, compound  
rest, hollow spindle.  
22x12 Munzer, c. r., hol. spindle.  
28x18 Niles, compound rest & taper.  
60x22 American, triple grd., hol. spdl.  
8x32 in. Pratt & Whitney, turret.

#### DRILLS AND BORING MILLS.

14 in. Cincinnati, sensitive.  
18 in. Reed, lever feed.  
20 in. Hamilton, lever feed.  
21 in. Aurora, worm & lever fd., new.  
25 in. Hamilton, b. g. p. f.

3 spindle Davis & Egan, sliding hds.  
6 spindle Foote-Burt, heavy.  
Post drill.  
7 ft. Niles double head boring mill.

#### PLANERS AND SHAPERS.

24x24x6 Lodge & Davis.  
26x26x8 Pratt & Whitney.  
30x10 open side.

60x60x12 Flather, 3 heads.  
14 in. Steptoe, single geared, new.  
20 in. Steptoe, back geared.

#### MILLING MACHINES.

No. 1 Brown & Sharpe, univ., div. hd.  
No. 3 Becker-Brainard, vertical.

No. 44 Becker-Brainard, pl. b. g. (2).  
No. 3 Garvin, hand.

These millers are first-class machines.

#### MISCELLANEOUS.

Band saw, 20 in.  
Centering machine.  
Chain blocks, assorted (8).  
Emery stand.  
Forming machine, No. 00 Brown &  
Sharpe, automatic.  
Gasoline pumping outfit, 3 $\frac{1}{2}$  h. p.  
Glue boiler, 5 gal.  
Hack saw, power.

Lathe chucks (3).  
Plate planer, 20 ft. Niles.  
Punch and shear, single, Newbold,  
weight, \$300.  
Punch and shears, old style,  $\frac{1}{2}$  x  $\frac{1}{2}$  in.,  
\$110.  
Slotted, 16 in. Hewes & Phillips  
\$190.  
Surfacer, double, 26x12 in. Egan.

Cash paid for second-hand metal working machinery.

## SECOND-HAND MACHINERY

### FOR SALE BY

J. J. McCabe,

30 Church St., New York City.

#### LATHES.

100 in. x 30 ft. triple geared, Bement.  
 84 in. x 24 ft. triple geared, Boston.  
 82 in. tr. gd. pit lathe, t. stock & carr.  
 76 in. double head driving wheel lathe, Bement.  
 64 in. x 26 ft. triple geared, Bement.  
 60 in. x 18 ft. triple geared, Fitchburg.  
 54 in. x 21 ft. triple geared, Fitchburg.  
 52 in. x 28 ft. tr. gd., Hewes & Phil.  
 50 in. x 32 ft. triple geared, Putnam.  
 48 in. x 24 ft. triple geared, Fitchburg.  
 48 in. x 16 ft. triple geared, Putnam.  
 38 in. x 16 ft. back geared, Fifield.  
 38 in. x 12 ft. triple geared, Gleason.  
 37 in. x 20 ft. risers 43 in., American.  
 34 in. x 12 ft. triple geared, Fitchburg.  
 32 in. x 13 ft. back geared, Pond.  
 30 in. x 23 ft. Pond.  
 30 in. x 17 1/2 ft. Pond.

28 in. x 15 ft. Worcester.  
 28 in. x 14 ft. Harrington.  
 27 in. x 20 ft. Pond.  
 26 in. x 13 ft. Bement, taper.  
 26 in. x 12 ft. Niles.  
 25 in. x 16 ft. Lathe & Morse.  
 25 in. x 14 ft. Blaisdell.  
 24 in. x 10 ft. Standard.  
 22 in. x 10 ft. Pond.  
 21 in. x 10 ft. Putnam.  
 20 in. x 12 ft. Pond.  
 20 in. x 9 ft. Pond.  
 20 in. x 8 ft. Draper, quick change.  
 18 in. x 8 ft. Reed, plain rest.  
 18 in. x 8 ft. Putnam.  
 16 in. x 8 ft. Bogert, plain rest.  
 16 in. x 6 ft. Morris, quick change.  
 16 in. x 6 ft. Putnam.  
 14 in. x 6 ft. Reed.

#### PLANERS.

72 in. x 26 ft. Sellers, 4 heads.  
 72 in. x 18 ft. Bement, 4 heads.  
 54 in. x 16 ft. Sellers, 4 heads.  
 50 in. x 16 ft. Bement, 2 heads.  
 42 in. x 18 ft. Niles, 2 heads.  
 37 in. x 11 ft. Niles, 3 heads.  
 36 in. x 11 ft. Sellers, 2 heads.  
 36 in. x 10 ft. Bement, 2 heads.  
 36 in. x 9 ft. Sellers, 2 heads.  
 36 in. x 8 ft. Pond, 2 heads.

36 in. x 8 ft. Pond, 1 head.  
 35 in. x 12 ft. New Haven, 2 heads.  
 34 in. x 14 ft. Gleason, 1 head.  
 32 in. x 10 ft. Pond, 2 heads.  
 30 in. x 8 ft. Fitchburg, 1 head.  
 30 in. x 7 ft. Sellers, 2 heads.  
 27 in. x 7 ft. New Haven, 1 head.  
 26 in. x 6 ft. Putnam, 1 head.  
 24 in. x 6 ft. Pond, 1 head.  
 17 in. x 4 ft. Miles, 1 head.

#### BORING MACHINES

10 ft. upright, 2 heads, Niles.  
 7 ft. upright, 1 head, Bement.  
 6 ft. upright, 2 heads, Sellers.  
 5 ft. upright, 2 heads, Niles.  
 4 ft. upright, 2 heads, Colburn.  
 3 ft. upright, 1 head, Bullard.

Hor. floor boring machine, double column and attachment, Niles.  
 Horizontal 2 1/2 in. spindle, Bement.  
 Horizontal 2 in. spindle, Sellers.  
 Horizontal 1 1/2 in. spindle, Garvin.

#### DRILLS—UPRIGHT AND RADIAL.

144 in. radial, plain, Baush.  
 132 in. radial, plain, Sellers.  
 120 in. radial, full universal, Warren.  
 110 in. radial, full universal, Bement  
Miles.  
 50 in. upright, Harrington.

40 in. upright, Prentice.  
 38 in. upright, New Haven.  
 36 in. upright, Pond.  
 32 in. upright, Pond.  
 28 in. upright, Snyder.  
 25 in. upright, Barnes.

#### MISCELLANEOUS.

Bolt cutters, 1 & 1 1/2 in. Acme.  
 Cutting-off machine, 3 in. Pratt & W.  
 Gap turret lathe, 32-50 in. Gisholt.  
 Gap turret lathe, 32 in. American.  
 Gap turret lathe, 27 in. American.  
 Gap turret lathe, 24 in. Gisholt.  
 Gas engine, 6 h. p., White & M.  
 Gear cutter, 30 in. Gould & E.  
 Grinder, auto. surface, Walker.  
 Grinder, univ. cutter and tool, Cin'ti.  
 Keyseater, 12 in. stroke, Newton.  
 Miller, Lincoln style, Garvin.

Pipe machine, 4 in. Philadelphia.  
 Screw mchc, 24 in. P. & W., wire fd.  
 Slotters, 16 in. Sellers; 12 in. Bement.  
 Shaper, crank, 26 in. Prentiss.  
 Shaper, friction, 20 in. Putnam.  
 Shaper, crank, 15 in. Gould & E.  
 Shaper, 14 in. Fitchburg, traveling hd.  
 Slab miller, 3 in. x 11 ft. Newton.  
 Slab miller, 22 in. x 25 ft. Ingorsoll.  
 Sprue cutter, No. 172 Bliss.  
 Steam hammer, 4,000 lb., Bement.  
 Steam hammer, 1,250 lb., Bement.

#### RAILROAD TOOLS.

Driving wheel lathe, 79 in. dbl. hd.  
 Car-wheel grinder, double head.

Double end axle & centering mchc.  
 Dbl. hd. axle lathe, 27 in. Bridgeford.

#### BRIDGE & BOILER TOOLS.

10 ft. bending rolls, hinged housing.  
 6 ft. bending rolls, solid housing.

24 in. punch & shear, single, heavy.  
 9 in. punch & shear, Hilles & Jones.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Don M. Osborne, - 719 St. Clair Ave., N. E., Cleveland, Ohio**

#### HAMMERS.

500 lb. Bement, steam, single frame. | 5,000 lb. drop, friction board, Toledo,  
2,000 lb. Bement, steam, dbl. fr. \$750 | for sheet metal work.

#### LATHES.

22 in. American turret lathe, 4 $\frac{1}{2}$  in. hole thru spindle, with pump, scroll  
chuck and Reeves variable speed countershaft.

25 in. x 10 ft. LeBlond heavy turret lathe, with power feed turret on shears,  
three step cone, double back geared quick change, 24 in. chuck, heavy carriage  
with compound rests.

30 in. x 31 ft. Ohl & Co., triple geared, 25 ft. between centers, comp. rests.

35 in. x 12 ft. Hughes & Phillips, triple gear, compound rest, \$250.

48 in. x 24 ft. Michel, triple back geared, compound rest, 18 ft. centers.

60 in. x 42 $\frac{1}{2}$  ft. Hughes & Phillips, tr. gd., c. r., 33 ft. between centers.

60 in. x 45 ft. Roach, triple geared, 3 $\frac{1}{2}$  ft. between centers, compound rest.

66 in. x 35 ft. Hughes & Phillips, triple geared, 26 ft. centers, 48 in. raised to 66 in.

64 in. x 60 ft. Thomas Shanks & Co., Glasgow, double lathe, 50 ft. between  
centers; one end swings 64 in., other 50 in.; 2 head stocks, 2 tail stocks and  
2 carriages; triple back geared at both ends; one carriage has screw feed full  
length of bed, the other has double tool post and feeds half length of bed;  
will sell cheap.

120 in. x 18 ft. gap lathe, triple geared, compound rest.

#### PLANERS.

24x24x6 Pease, single head. | 96x96x20 Betts, single head, good or-  
60x60x18 Betts, 4 hds., good cond. | der, cheap.

#### SLOTTER.

Slotter, 24 in. Niles, actual stroke of bar 60 in., for outside work; excellent  
condition, price reasonable.

If you have used machine tools for sale or exchange, advise me.

### FOR SALE BY

**J. W. Wright & Co., 2nd and Morgan Sts., St. Louis, Mo.**

#### LATHES.

18x10 Mueller, plain rest.

18x10 Bradford, compound rest.

19x10 Gray, compound rest.

19x12 Gray, compound rest.

15x15x36 in. New Haven.

24x24 in. x 8 ft. Pease, 2 heads.

20x12 Gray, compound rest.

28x12 Field, compound rest.

29x12 Reed, compound rest.

42x15, compound rest.

#### PLANERS AND SHAPERS.

24 in. Steptoe, triple geared.

#### PLANERS.

C-2 Ferracute, power.

No. 33 Swaine, power.

No. 35 Swaine, power (3).

#### PRESSES.

No. 51 Swaine, power (3).

Small presses, power (2).

No. 3 Swaine, foot (7).

#### SCREW MACHINES.

No. 5 $\frac{1}{2}$  Bardons & Oliver, 2 $\frac{1}{2}$  in. capacity, A-1.

#### DRILLS.

28 in. Sibley, back gear, power feed.

34 in. upright, back geared, power fd.

3 $\frac{1}{2}$  ft. Fosdick, radial.

4 ft. Gang, radial.

#### MOTORS.

10 h. p. Fairbanks, a. c., 220 v., 60 c., single phase.

20 h. p. Ft. Wayne, a. c., 220 v., 60 c., 3 p.

50 light dynamo.

#### FAN.

5 h. p. Wagner, a. c., 220 v., 60 c., single phase.

5 h. p. Ft. Wayne, a. c., 220 v., 60 c., 3 p.

5 h. p. Fairbanks, a. c., 220 v., 60 c., 3 p.

#### MISCELLANEOUS.

Blower, No. 2 Roots.

Bolt cutter, 1 $\frac{1}{2}$  in. National, double.

Boring mch., cylinder, No. 1 Barrett.

Cock grinder.

Compressor, 22x26 $\frac{1}{2}$ x24 in., Inge, soll.

Cutter grinder, No. 3 Brown & S.

Floor grinder, No. 2 Safety.

Gear cutter, Standard, automatic.

Hack saw, power.

Hammer, power, No. 4 Perfect.

Punch and shear, combination, Ohl.

Vise, No. 5-F., B. & S.

## SECOND-HAND MACHINERY

### FOR SALE BY

Beronio & Palmer, 221 Jefferson Ave., - - - Memphis, Tenn.

#### AIR COMPRESSOR.

12x10x6x12 Laidlaw, Dunn & Gordon, straight line, 2 stage, made for 300 lbs. pressure to the square inch; good as new. We deal in all kinds of second hand machinery.

### FOR SALE BY

The E. L. Essley Mch Co., 555-557 Washington Blvd., Chicago, Ill.

#### DRILLS.

2 spindle Burnham, sensitive,  $\frac{1}{2}$  cap.  
4 spindle 18 in. W. F. & J. Barnes,  
gang, power feed, automatic stop.  
4 spindle No. 3 Garvin, multiple.  
6 spindle No. 3 Garvin, multiple.  
28 in. Hamilton, sliding head, back  
geared, power feed.

#### BORING

27 in. Streit pulley boring machine  
27 in. Baush & H., 2 heads, pl. table.

#### ENGINE

18x7 Blaisdell, taper attachment.  
16x6 Muller, hollow spindle, p. c. f.  
16x6 Lodge & Shipley, quick change  
gear.  
16x6 Walcott & Wood, quick change  
gear, nearly new.  
17x8 Le Blond, pl. rest, 1 $\frac{1}{2}$  in. hole.  
17x8 Perkins, rebuilt.  
18x6 Fuller & Wilson, good, cheap.

#### MISCELLANEOUS

14 in. Monitor, plain head.  
15x5 B. & O., Monitor, back geared.  
No. 21 Garvin, plain head, Monitor,  
13-16 in. hollow spindle.

#### MISCELLANEOUS

Air compressor, 13x8x12 in. Curtis,  
belt driven, cap. 161 cubic ft. per  
minute.

Bench folder, 30 in.

Bolt cutter, 1 $\frac{1}{2}$  in. Adams, single  
Landis head.

Bolt cutter, 2 in. Bement, single.

Bolt pointer, 1 in. Adams.

Brake, No. 2C Dries & K., 7 ft. 14 ga.  
Buffing lathe, 2 h. p. motor drive,  
110 volts, d. c.

Gear cutter,  $\frac{1}{2}$  in. Becker, spur gears  
only, used 3 months.

Grinder, No. 1 Diamond, double,  
wheel face.

Grinder, 20x3 in. Diamond, single  
wheel, wet.

Miller, hand, No. 2 Fox.

Millers, No. 4 Garvin, plain (2).

Miller, vertical, No. 3 Becker, with  
rotary, practically new.

Motor, 10 h. p. Crocker-Wheeler  
230 v., d. c., with starting box and  
switch.

Pipe mch., 4 in. Borden, complete.

A partial list of used machinery for quick delivery. Write for our complete  
list of new and used machinery, and state your wants; we may have it.

#### DRILLS.

Baker Bros. upright high speed drill  
presses, complete, nearly new, (2).  
22 in. Bickford, sliding head, over-  
hauled.

28 in. Moline, sliding head upright,  
nearly new.

#### MILLS.

Hofer, horizontal boring, drilling  
and milling machine, wt. 3,000 lbs.

#### LATHES.

18x8 Le Blond, fine condition.  
18x8 Lodge & Davis, compound rest.  
18x10 Johnson. h. s., p. c. f., cheap.  
20x6 Flather, overhauled, fine cond.  
21x12 Blaisdell, with 16 in. 4-j. chuck.  
32x18 New Haven, compound rest.  
33x26 New Haven, fine condition.  
36x14 Pratt & Whitney, solid spndl.  
36x25 New Haven, c. r., fine order.

#### MISCELLANEOUS LATHES.

16 in. Monitor, plain head.  
24 in. Davis chucking, set over turret.  
28 in. Gisholt, standard turret, comp.  
2x24 in. Jones & L., flat turret.

#### MISCELLANEOUS

Planer, 26x26x6 New Haven, 1 head.  
Planer, 36x36x8 Betts, 1 head.

Planer, 56x45 in. x 25 ft. Betts, gear  
driven, 2 hds., good condition.

Profiler, Ames, 2 spindle, fine order.

Punch press, combination gear and  
fly wheel, Crosby, 3,000 lbs.

Rivet spinner,  $\frac{3}{8}$  in. National.

Saws, No. 4 Keystone, cold, 4 $\frac{1}{2}$  in.

Screw mch.,  $\frac{1}{2}$ -1 1-16 in. plain auto-  
matic, high speed drilling attach.

Screw mch.,  $\frac{1}{2}$ -1 1-16 in. Cleveland  
New Standard automatic, 5 hole  
turret, several attach., 3 years old.

Screw machine, 2 in. Standard Cleve-  
land automatic, 5 hole turret.

Shaper, 17 in., gear driven, good con-  
dition, cheap.

Square shear, 30 in. Niagara, foot.

Tempering furnace, oil, 16 in. diam.,  
complete with thermometer.

Threading mch., roll, Rudolph & K.

Turret lathe, 13 in. No. G Gisholt,  
standard, complete equipment for  
bar work, second hand, nearly new.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Cincinnati Planer Co.,**

Cincinnati, Ohio.

15x5 Dreses, turret.

#### LATHES.

16x16 screw, automatic.

16x6 American, taper attachment.

#### PLANERS.

24x24x6 L. W. Pond, 1 head.

34x24x12 Cincinnati, 2 heads.

28x28x8 Cincinnati, 1 head.

36x36x14 Chandler, 2 heads.

30x30x12 Cincinnati, h. p., 2 heads.

74x56x20 L. W. Pond, 2 heads.

30x30x14 Cincinnati, 2 heads, 1. p.

#### MISCELLANEOUS.

Boring and drilling machine, No. 1  
Fosdick, horizontal.

Drill, 5 ft. Fosdick, plain radial, par-  
allel drive.

Drill, 14 in. American, sensitive.

Shaper, 15 in. Springfield, crank.

New

34 in. sc

40x36 in

delive

707-71

Re

5 in. W

Dallet,

Quint,

4 ft. Bo

23x9 in

No. 1 C

No. 1 1

No. 2 1

Yanke

60 lb. E

24x2 in

13x6 Bu

14x8 Pl

16x6 Pr

back

16x8 Gr

rest, t

18x10 Pl

20x8 Fl

No. 3 L

No. 2 3

10 in. B

20x20x4

24x24x6

No. 62

15 in. H

15 in. S

crank

16 in. S

16 in. G

20 in. H

22 in. U

24 in. L

28 in. G

Belt lac

Gap riv

matic

### FOR SALE BY

**The Osborne & Sexton Machinery Co.,** . . . Columbus, Ohio.

#### LATHES.

2x24 in. Jones & Lamson turret.

16x10 L. & S., quick change, taper.

12x5 W. C. Young, compound rest.

26x10 Pond, compound rest, p. c. f.

14x6 Monarch, c. r., p. c. f.

48x18 Fifield, triple geared.

15x5 turret on shears.

54 in., gap, turret on ways.

#### PLANERS AND SHAPERS.

24x24x6, 1 head.

14 in. Hendey.

30x30x12 Bement-Daugherty.

20 in. Smith & Mills, back geared.

#### DRILL PRESSES.

4 spindle sensitive.

26 and 28 in. Prentiss, sliding head.

20x21 in. plain and back geared.

34 in. Sellers, comp. table, b. g., p. f.

#### MISCELLANEOUS.

Cock grinder, double.

Hammers, 450, 750, 3,000 and 5,000 lbs.,

Flexible shaft drill, complete.

Toledo friction board drop.

Gas engines, 10, 15, 22, 25 and 100 h.p.

Presses, foot, No. 1 Consolidated(6).

Grinder, universal, Brown & Sharpe.

Presses, power, No. 2 Consolidated

Hack saws, Nos. 1, 2 and 3.

(2).

Hammer, steam, 1,100 lbs., Morgan.

Tapping machine, Webster & Perks.

We have other second-hand machines. Mail us your requirements.

### FOR SALE BY

**W. L. Perkins Jr. & Co., 136 Liberty St.,** . . . New York City, N. Y.

#### LATHES.

12x4 automatic thread cutting.

26x10 Pond, c. r., p. c. f.

14x5 Hendy, c. r., p. c. f.

26x12 Blaisdell, c. r., p. c. f.

16x6 LeBlond, c. r., p. c. f.

30x14 Bement, c. r., p. c. f.

18x5 Reed stud lathe.

32x14 Harrington, c. r., p. c. f.

20x8 Bement, c. r., p. c. f.

12 in. Hardons & Oliver, turret.

20x10 Harrington, c. r., p. c. f.

18 in. American, brass turret.

#### DRILLS.

16 in. plain wheel & lever.

40 in. Prentice, b. g. & p. f.

30 in. Aurora, b. g. & p. f.

4 ft. Bement semi-radial.

32 in. Pond, b. g. & p. f.

6 ft. Niles plain radial.

36 in. Gould & Eberhardt, b. g. & p. f.

8 ft. Bement half universal.

#### PLANERS.

24x20 in. x5 ft. Pond.

36x36 in. x10 ft. Bement, 2 heads.

25x25 in. x5 ft. 9 in. Sellers.

36x36 in. x30 ft. Pond, 4 heads.

26x26 in. x6 ft. Putnam.

46x46 in. x7 ft. 4 in. Sellers.

#### MISCELLANEOUS.

Miller, slab, 24 in. x8 ft. Bement-M.

Shear, No. 5 Long & Allstatter.

Miller, slab, 34 in. x11 ft. Newton.

Slotter, 10 in. Sellers.

Punch, No. 4 Long & Allstatter.

Slotter, 12 in. Sellers.

## SECOND-HAND MACHINERY

### FOR SALE BY

New Haven Manufacturing Co., - - - - - New Haven, Conn.

#### PLANERS.

36 in. square x 10 ft., double heads, new (2).  
40x36 in. x 10 ft., double heads, rebuilt, practically good as new; immediate delivery.

### FOR SALE BY

The Motch & Merryweather Machinery Company,  
707-715 Lakeside Av., N. W., - - - - - Cleveland, Ohio  
Branches: Detroit, Cincinnati, Pittsburg.

Refitted Machine Tools.

#### CENTERING MACHINE.

5 in. Whiton, 2 spindle.

#### UPRIGHT DRILL PRESSES.

Dallet, portable (2).

26 in. Prentice, sliding head.

Quint, 6 spindle, turret.

23 in. Bement-Miles.

4 ft. Box, half universal.

#### RADIAL DRILLS.

33x9 in. x 4 p., Gould & Eberhardt.

4 ft. 6 in. Pond, heavy.

#### GEAR CUTTERS.

33x9 in. x 4 p., Gould & Eberhardt.

#### GRINDERS.

No. 1 Cincinnati, cutter, complete.

Yankee P.O. drill grinder.

No. 1 Leland & Faulconer, wet tool.

No. 11 Brown & Sharpe, (2).

No. 2 Leland & Faulconer, wet tool.

No. 4 Landis universal.

Yankee A. drill grinder.

No. 24 Landis plain.

#### HAMMERS.

60 lb. Bradly, cushion helve.

#### KEYSEATERS.

24x2 in. Morton.

#### ENGINE LATHES.

13x6 Bullard, with turret.

22x15 Pond, compound rest.

14x8 Flather, 4 step cone, elev. rest.

22x12 Lathe & Morse, 4 step cone,

16x6 Prentice, 4 step cone, double

belt feed, compound rest.

back geared, compound rest.

20x8 Flather, 5 step cone, belt feed,

16x8 Greaves & Klusman, compound

compound rest.

rest, taper attachment.

24x12 Lodge & Shipley, 5 step cone,

18x10 Porter, compound rest.

compound rest, quick change.

20x8 Flather, 4 step cone, belt fd., c. r.

48x20 Johnson, triple gd., massive.

#### POLISHING LATHES.

No. 3 Diamond.

#### MILLING MACHINES.

No. 2 Garvin, plain.

#### PLANERS.

10 in. Busch, crank, with swivel vise.

27x5 New Haven, 1 head, (2).

20x20x4 Wheeler, 1 head.

30x10 Detrick & Harvey, open side.

24x24x6 Whitcomb, 1 head.

#### PRESSES.

No. 62 Toledo, triple geared.

P-4. Ferracute.

15 in. Hendey.

20 in. Kelly, crank.

15 in. Smith & Mills, single geared

24 in. Ohio, shifting belt.

crank.

26 in. Cincinnati, shifting belt.

16 in. Steptoe, crank.

28 in. Hendey, friction.

16 in. Gould & Eberhardt, crank.

32 in. Gould & Eberhardt, extension

30 in. Hendey, friction.

base.

#### TURRET LATHES.

22 in. Universal, chuck fitted.

44 in. Grant chucking lathe.

24 in. Lodge & Shipley screw mach.

No. 22 Prentice full automatic chuck-

28 in. Gisholt, rapid traverse.

ing lathe.

#### MISCELLANEOUS.

Belt lacer, 16 in. Peerless.

Nut taper, 1½ in. Acme, 6 spindle.

Gap riveter, 10x36 in. Chicago, pneu-

matic.

Punch, pneumatic, No. 1 Caskey.

Punch, 8 in. Badger "G."

## SECOND-HAND MACHINERY

### FOR SALE BY

**New York Machinery Exchange, - 50 Church St., New York City.**

16 Garvin hand milling machines.

26 Garvin plain milling machines.

39 Turret lathes and screw machines.

All the above are located in a plant just purchased.

#### PLANERS AND SHAPERS.

24x24x6 Pease planer.

24x24x10 Putnam planer.

36x36x17 Sellers planer.

48x48x16 Sellers planers.

52x52x20 Fitchburg planer.

16 in. Gould & E. bk. geared shape.

#### MISCELLANEOUS.

Boring mill, vertical, 7 ft. Betts, 2 heads, extension 10 ft.

Drill press, 48 in. Harrington.

Hobbing machine, 48 in. Grant.

Radial drill, 3 ft. Baush, plain, with tapping attachment.

Radial drill, 5 ft. Baush, plain.

Slotter, 12 in. Sellers.

### FOR SALE BY

**McCabe Machine Co.,**

**P. A. McCabe, Pres.,**

**95 Liberty St., New York, N. Y.**

Boring mill, 30 in. Bullard, swivel turret, combination chuck, near new.

Boring mill, 42 in. Bullard, double head with turret, combination chuck, good.

Drill, 28 in. Prentice, geared feeds, equipped for tapping, near new.

Flat turret, 24x24 in. Jones & Lamson, with tools, good.

Gear cutter, 24 in. Becker-Brainard, automatic, cuts spur and bevels, near new.

Grinder, No. 2 Brown & Sharpe, universal, capacity 12x30 in. near new.

Lathe, 18x8 ft. Lodge & Shipley, rapid reduction type, good.

Lathe, 32 in. x12 ft. Fitchburg, modern style, good.

Planer, 28x28 in. x10 ft. Gray, double head, near new.

Slotter 12 in. Sellers, 30 in. table, with all feeds, good.

Turret lathe, semi-auto. Potter & Johnston, 2 in. hole, p. c. feed, near new.

Turret lathe, 26 in. x10 ft. Bullard, triple geared, 38 in. hole, screw cutting ex. turret; will face 21 in. diameter; good.

"Near new" indicates condition practically good as new.

"Good" indicates condition not quite "near new."

### FOR SALE BY

**The Randle Machinery Co., . . . 1739 Powers St., Cincinnati, O.**

#### BOILERS.

Horizontal tubular, from 6 to 150 h. p., for all pressures.

Fire box, from 8 to 80 h. p.

Vertical, from 3 to 50 h. p.

#### ENGINES.

Corliss, from 50 to 350 h. p.

Automatic, from 25 to 180 h. p.

Throttling, from 5 to 150 h. p.

#### PULLEY LATHE.

60 in. Stevens.

#### DRILL PRESS.

6 in. b. g., p. f. drill.

#### MILLER.

#### TOOL GRINDER.

Duplex brass miller.

Springfield tool grinder.

#### BLOWERS.

#### BULLDOZER.

Nos. 2 and 4 Roots.

No. 36 Pittsburg.

#### PIPE THREADER.

AIR COMPRESSOR.

4 in. Camden.

8x6x9 locomotive type.

#### MISCELLANEOUS.

Heaters, pumps, tanks, blowers, exhausters, saw mill and general machinery.

Write for list. Also a full assortment of new machinery.

Sole manufacturers of the celebrated "Leader" Injectors and Ejectors. Send for circulars.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Huber Manufacturing Company, - - - Marion, Ohio**  
AIR COMPRESSOR.

One Ingersoll-Rand air compressor, 10x16  $\frac{1}{2}$ x10  $\frac{1}{2}$ x10. Capacity, 256 cubic feet. In first class shape in every respect. Can be inspected at our factory if desired.

### FOR SALE BY

**O. L. Packard Machinery Co., Chicago, Ill., and Milwaukee, Wis.**

#### LATHES.

22x22, plain rest.	36x16 Le Blond.
36x30x18 Fifield, compound rest.	72x22, comp. rest. with raising blocks to increase swing to 120 in.
26 in. chucking.	

#### PLANERS.

24x24x5 Pond, 2 heads on cross rail.	24x24x7 Pease.
24x24x6 Hendey.	

#### DRILLS.

22 in. Barnes, power feed.	5 ft. Cincinnati full universal radial.
46 in. New Haven upright.	

#### MILLERS.

No. 2 Becker-Brainard vertical.	No. 24 Oesterlein, plain.
No. 3 Garvin, plain.	

#### MISCELLANEOUS.

Die milling machine, Thurston.	Hammer, steam, 250 lbs. Bell.
Gear cutter, 36 in. Brainard.	Riveter, $\frac{1}{2}$ in. Shuster.

### FOR SALE BY

**Wickes Brothers,**

**West & Cedar Sts., New York City.**

#### LATHES.

12x4 Lodge & Davis, turret.	16x5 Prentice, hollow spindle.
12x6 automatic threading, hol. spdl.	16x8 Fox lathe.
12x5 Young, hollow spindle.	18x4 Gray, turret.
12x5 Lathe & Morse, hollow spdl.	20x8 Pratt & Whitney.
12x8 Ames, screw cutting.	22x24 Fifield.
12x5 Lodge & Davis, turret.	24x8 ft. 4 in. Putnam.
12x5 Draper, hollow spindle.	26x9 Sherman, screw cutting.
12x5 Blatsdell, hollow spindle.	30x11 ft. 6 in. Wood & Light.
12x6 Jones & Lamson, hollow spdl.	36x16 Pond.
12x6 Sebastian, hollow spindle.	36 in. pulley lathes, (2).
12x8 Phoenix, screw cutting.	42 in. Pond, wheel and axle.

#### SHAPERS.

8 in. Bement, crank.	14 in. traverse.
10 in. Fitchburg.	15 in. Industrial, traverse.
12 in. back geared.	

#### DRILLS, PLAIN

10 in. post drill.	42 in. Baush combined radial and vertical.
14 in. Henry & Wright, sensitive.	48 in. plain radial.
21 in. post or wall drills (6).	4 ft. Universal plain radial.
48 in. Putnam, upright, back geared.	5 ft. Niles plain radial.
4 spindle Western, upright.	8 ft. Niles plain radial.
No. 3 Garvin, four spindle, (2).	
6 spindle gang.	

#### SCREW MACHINES

1 in. Cleveland automatic turret.	1 in. Cleveland automatic turret.
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#### PLANERS.

18x11x22 in., crank.	42x35x7 Bement, double head.
22x25x5 Putnam.	66x60x36 Bement, 3 heads.
28x30x7 Aldrich & Calvert.	66x61x25 ft. 8 in. Bement, 3 heads.
34x35x10 Pratt & Whitney.	

## SECOND-HAND MACHINERY

### FOR SALE BY

**C. A. Strelinger Co., - Bates & Congress Sts., Detroit, Mich.**

Air compressor, 16x12 in. type EE-1 Ingersoll.  
Bolt cutter, 1 in. Adams, complete.  
Boring and turning mill, 38 in. Baush, with 2 swivel heads, four chuck jaws.  
Engine lathe, 16 in. x10 ft. LeBlond, standard pattern.  
Engine lathe 24 in. x10 ft. Porter, with chuck.  
Milling machine, Burke, with index heads, arbor and column.  
Milling machine, No. 3 Fox, hand and power feed.  
Milling machine, No. 3 Owen, plain, with all power feed.  
Radial drill, 3 ft. Bickford tapping attachment.  
Standard No. 1 drawing and broaching press.  
Tool grinder, Gisholt.  
Press, D. G. No. 73 Ferracute.

### FOR SALE BY

**Frank Toomey, Inc., - 127 N. Third St., Philadelphia, Pa.**

#### MILLING MACHINES.

No. 2 Cincinnati, universal.  
No. 1 Brown & Sharpe, universal (2).

#### HAMMERS AND RADIAL DRILLS.

1500 lbs. Bement & Miles d. f.  
750 lbs. Bement & Miles d. f.

#### LATHES.

18x8 Davis & Egan.  
22x16 Pond.

No. 2 Brown & Sharpe, plain (2).  
36 in. x12 ft. heavy slab miller.

#### 350 lbs. Morgan s. f.

36 in. Morris radial.

#### 25x10 Prentice.

38x22 Fitchburg.

#### MISCELLANEOUS.

Boring mill, vertical, 10 ft. Betts.  
Pulley lathe, 60 in. New Haven.

Planer, 60x60x22 Dietrick & Harvey,  
open side.

## THE LODGE & SHIPLEY MACHINE TOOL CO.

Offers at a bargain the following tools, some of  
which are NOW IN USE in its own shops:

#### LATHES.

One 24 in. x 8 ft., 5 step cone head, quick change gear Lodge & Shipley lathe with turret on carriage.

Two 3½ in. x 60 in. Fitchburg Machine Works Lo-swing lathes.

One No. 3 Lodge & Shipley Rapid Reduction lathe with 8 ft. bed.

#### TURRET CHUCKING LATHE.

One 30 in. x 8 ft., 4 step cone head, power feed to turret, Lodge & Shipley.

#### PLANERS.

One 36x36 in. x 10 ft., 3 head, William Sellers Co.

One 36x36 in. x 26 ft., 4 head, William Sellers Co.

One 42x42 in. x 20 ft., single head, Putnam Machine Tool Co.

**The Lodge & Shipley Machine Tool Co.**  
**CINCINNATI, OHIO, U. S. A.**

Wouldn't You Like To See  
**Your Name On That Sign?**

What's the Best Way to Get it There?



There are two widely diverging methods of building up a business of making and marketing machinery.

One way is to expend lots of capital, months of time and tons of energy wholly in organizing the manufacturing end of your business, while nothing is coming in. It means costly experimenting, unforeseen delays, unavoidable mistakes—then slow deliveries till things get going right.

The other way is to *let us make your machines* under a liberal contract. We have the organization and experience to produce high-grade tools at less cost than you can make them for a long time. *This leaves you free to devote all your time and energy and most of your capital to building up your market.*

**Then**

when the commercial success of your business is an established fact, you can build your own factory—a bigger and a better one, too, because you will then have a definite knowledge of your shop requirements, you can estimate closely the output that can be disposed of profitably, and the profits you are making can go into the plant.

And in the mean time you will have established a reputation for the name that goes on that sign.

*Wouldn't you like to consult with us about it?*

**C. H. Cowdrey Machine Works**  
Fitchburg, Mass.

# Time Will Tell!

EACH succeeding year will testify, with growing emphasis, to your wisdom of having put in



## "New Britain" Iron Bench Legs

Substantial, shapely, easily planked and installed, each 8 foot section may be treated as a separate unit. Independent of wall support, with least labor and material required in construction, they are the standard of modern bench economy and durability.

*Now is the time to install these benches*

**The New Britain Machine Co.**  
60 Chestnut St., New Britain, Conn.

